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MANUAL

OF UNIFORM COURSE OF STUDY FOR THE ELEMENTARY SCHOOLS OF OHIO

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FOR THE

ELEMENTARY SCHOOLS OF OHIO

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COMPILED UNDER THE DIRECTION OF
FRANK W. MILLER
State Commissioner of Common Schools

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PREFACE.

This uniform course of study for the Elementary Schools of Ohio was written by representative school people, who are expert in their special subjects. The schools that have but one teacher for the eight grades will be greatly benefited, if the Boards of Education instruct their teachers to follow the outlines as given in this manual. The elementary teachers of the village schools, where no definite course of study is followed, will also obtain good results by following these outlines. Many teachers fail because they cannot distinguish the important facts to be taught, from the trivial and un-important ones. Methods of presentation must be understood and definitely planned by the teacher, if the teacher obtains the best results; therefore this manual is offered to the Boards of Education and teachers of Ohio for their use. We do not recommend any certain text books to be used, as this course was written in such a way that any text book written for the elementary schools in the different branches, may be used. The contributors of these courses in the different branches of study gave their time and efforts to the preparation of their work without compensation; and I take this opportunity to thank them for their excellent contributions. The course in Agriculture is taken from the "Tentative Course" and Bulletins, previously issued. I take pleasure in recommending this course of study for the elementary schools of Ohio.

FRANK W. MILLER,
State Commissioner of Common Schools.

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YOUR FIRST ADMINISTRATION.

By Mrs. Pearl B. Harris, Clyde, Ohio.

Beginners in the teaching profession: You are young people of good moral character, making an effort to raise your standard and broaden your theory of life. You have hopes of being successful teachers. Having for a background these principles, without which no person is fit to enter the school room as teacher, it is not unfit that you have a letter from another country school teacher, dealing with the practical routine of launching a country school administration. In any method or devise used in school, there must be the personality of the teacher—"the human touch"—to give it vitality.

There is no universal rule for conducting a school, because human nature cannot be reduced to a system. Many times your most cherished and most carefully thought-out plans will be found out of order when applied to concrete examples; this comes alike to experienced and inexperienced. This, however, is one great attraction in teaching. You never know what will happen next, and whatever does happen, you are not expecting it.

I assume that you have an "already accumulated wealth" beside what appears on the face of your certificate. You have attended your county institute, and saturated yourself with enthusiasm, the chief product of an institute. You have the Ohio Teachers' Reading Circle books; at least two educational papers, one state and one national; and other papers and magazines for information and culture. You possess a copy of each text-book used in your school. Besides these, you are beginning a collection of books from the world's great writers. These are the teacher's tools, without which no person, however gifted, can successfully teach.

For some time you have been thinking of your first school and your first day. You have been thinking for some years that you wanted to be a teacher. I hope so. I wish I were writing to teachers who really felt "the call" to teach. Probably you are without normal training, and your last year in school has been the time of greatest preparation for teaching. It is likely you have studied some text book on teaching, and have paid attention to your teacher, criticized her work, planned to adopt some of her methods and reject others. For your sake, I hope you have had a succession of good teachers—teachers who were alive and using up-to-date methods.

You are going into all sorts of schools; those made up of children from the rich farming communities; the iron and coal mining districts; and localities where the people are bowed with the weight of wresting a bare living from the soil, and whose faces are clouded with stolid

indifference. In all these schools there are different types of children, and you will suit your instruction to their needs.

Beginning your administration, you will have to deal with three elements: environment, mechanics of teaching, and real teaching.

If not acquainted with your district, a week or two before school begins go there for a visit to investigate conditions at the school house and get the records left by the last teacher. You will then know what is necessary to make your school house a comfortable living place—for that it must be. The Board of Education may have recently had the school house well cleaned, and all you have to think of is the school work proper. I understand that many Boards are not inclined toward that branch of civic righteousness. It is not the aim of this article to find fault—it is simply to help you meet the varying conditions of school life. The time for objections is before you are hired. I have little sympathy for the teacher who applies for a school without knowing the conditions to be met and reckoned with. If so blind as to have done this, then endure conditions, or better, quietly undertake to remedy them without whining.

A teacher should board in the district, as closely to the school as possible, so her time and energy may be conserved for school work. It is not the work of the school that enervates or kills; it is worrying about the school, or it is the things the teacher does out of school hours. If the teachers of Ohio could bring themselves to look at their profession from a business standpoint; if they could realize what they are doing is an important part of the world's work, there would be a revolution in teaching. The country schools would take on efficiency by leaps and bounds. The teachers would be actual promoters and there would be fewer time-serving dawdlers in the school room. A recent critic has said, "Those who can, do: those who can't, teach school."

There are townships in Ohio where the teacher hires the janitor. There may be persons that want to do the janitor work that are not to be trusted. For instance, a boy or girl from certain families in the district may bring objectionable characters for assistance. The pupils may arrive before the teacher. There have been cases of serious and far-reaching trouble from this cause. In such cases she would better do her own work. Do not think I am advocating janitor work for the teachers to take their minds off their troubles or any other interesting thing. Far from it. Having heard this janitor business discussed for a number of years, I have never known it maintained that there could be the remotest possibility of its being a good thing for the teacher to do that work.

Be that as it may, the necessary thing is that your school house be swept, dusted and made comfortable and attractive as possible for the first day of school. If it devolves on you to scrub your school house, you can do that afterwards. It may be the older boys and girls will help,

but remember this, you have no right to compel a pupil to do any kind of janitor work. If you state the conditions and call for volunteers you will get plenty of help. Pupils will ask for work oftener than you have work for them. In your preliminary inspection, if you are as refined and modest at heart as you are superficially, you will investigate the out-buildings. You will ascertain if they are fit for decent boys and girls to enter. In many districts the out-buildings are cleaned when the school house is cleaned. If this is not so, the teacher should not neglect it. Do you know, my rural teacher friends, that many little boys and girls get their first ideas of vulgarity, obscenity and vice from the rude, lewd engravings and vulgar inscriptions found in out-buildings at the school houses?

To a limited extent this is to be a "just how" paper. You may not want to do as the writer has done. You may find a better way. I hope so. One aim of this article is to give a point of view that will enable you to see the importance of the organization of details. The protection of children from immorality is not a small thing. To develop decent, honorable, patriotic citizens is about as high an aim as a school can have. So keeping the school out-buildings clean and decent is an important thing. I hope these buildings have locks and keys for reasons that may become too obvious after you have become acquainted with your neighborhood. You owe it to your own self-respect to see that this general cleaning-up is done. Do not lower your standards of life to such a degree that you will permit yourself to live in such environment. Paint and whitewash are cheap and need no professional skill to apply. Then the engravings can be planed off or so cut up with a knife that they mean nothing. The young man teacher will dismiss the girls, then he and the boys will carry water and scrub these buildings back to decency. Plenty of water, "elbow grease" and Red Seal Lye will do the work in fine shape. The young woman teacher can have tubs brought and have the boys to fill them with water and after dismissing the boys, she and the girls can do the work of cleaning. If you are a good housekeeper, young woman, and know easy ways of doing work don't leave all your talent in that line at home. I know that Red Seal Lye, Bon Ami, Sapolio, Sanitary dust cloths and many other sanitary and labor saving devices have their place in the school room economy just as much as in the home.

If your yard has not been mowed, do not have it done. Heavy stiff stubbles are dangerous for those sturdy bare feet. An unmowed yard is not a thing of beauty and if it has been mowed have the big boys or all children who wear shoes to make an effort to mash the stubble down. A small thing? Yes. There are smaller things, however, than care for human life and suffering.

Your windows are easily cleaned and kept clean. Doing the work with Bon Ami is so like play that the children insist on doing it. I allow

them to do so. I want them to learn to like bright, shiny windows and pretty clean things about them. Sash curtains are attractive if evenly made and put up on rods or coiled springs. They are almost a necessity if the windows open on a road, but do not leave them on sagging strings. I once knew a teacher whose curtains always sagged and whose skirt always refused to make proper connection with the waist in the back. She may have been a good teacher but she was slovenly and unattractive in person and work.

In this age of fear of dust and its probable attendant disease germs, you will want the floor oiled. If you will heat the oil and apply with an ordinary mop, it is very easy to apply and can be done in about the time it takes to sweep. Any hardware store wll furnish floor oil. Five gallons of oil makes three different applications (all that is needed for a year) on a floor 27 by 35 ft. The first application will need about three gallons. Put it on Friday evening. If you have the buying of window shades or other such supplies, pay as much attention to harmony of color as you would if you were buying for your home. I hope your walls have a few copies of famous paintings or portraits of great men and women and that they are framed. Of all the abominations in the way of decoration (?) it is a lot of chromos carpet-tacked on the wall, and then, as an added touch, some pieces of pasteboard of ungainly shape and uncertain color prevent the picture (?) from tearing from under the tacks. Better have a bare wall than such atrocities.

You will of course ask each pupil to get an individual cup. If you have not been furnished with water tank with faucet you will find a practical sanitary device in the use of long handled dippers from which the pupils fill their individual cups. Do not allow dippers to remain in water pail, for when the pail is full of water you can readily see that all the dirt on the handles from the children's hands will be washed off in the water. We use our old pail as a dipper container. The individual cups are of little value if each pupil plunges his cup into the common pail. Have some definite place to keep the cups so the pupils can not handle them more than necessary. I saw a boy diligently pat the bottom of his dirty bare foot with the cup he was waiting to dip into the common water pail. I assume, of course, that I am writing to the young teacher of average intelligence who understands the germ theory of disease—who not only understands it but believes it and has the enthusiasm to teach it. "The care of the public health is the first duty of every statesman." If this be true, what is the first duty of every teacher? It is a safely conservative statement that half the deaths in the U. S. are caused by the preventable disease. Sanitary science and public health is of so great importance that I wish each young teacher would feel so interested that she would take up this line of investigation and study to the end that she can make it the most important thing in her school work. Send to the U. S. Bureau of Education, Washington, D. C for

the Bulletin, "A Course of Study for the Preparation of Rural Teachers." In that read the article on Sanitary Science and the one on "Chemistry Applied to Rural Life." Send to the U. S. Treasury Department for free public health bulletins. Send to the Ohio State Board of Health, Columbus, for their monthly bulletins. Send to the U. S. Department of Agriculture for Farmers' Bulletin No. 375, "Care of Food in the Home" and for other bulletins on the same line. Besides this free material there are many valuable and inexpensive texts on the subject, that are easily intelligible to interested persons. Corn's "Yeasts, Molds and Bacteria in the Home," Bashore's "Sanitation of the Country Home," Price's "Hand Book on Sanitation" and Ritchie's "Primer of Sanitation" are excellent books. The latter is a text book for elementary schools. Sedgwick's "Principles of Sanitary Science and Public Health" and Harrington's "Practical Hygiene" are excellent advanced texts.

In that preliminary visit, you have consulted the last teacher's record, learned the names of your probable pupils and their stage of advancement. If there is no record, consult some of the older pupils in the district. This will save much confusion the first day. Any amount of time you spend planning your first day is well spent for your performance must continue for eight or nine months after the first day.

You will, of course, be on the ground early that first morning, but however early you are, you will be likely to find some child with his arm full of books waiting for the grand rush of selecting seats. Tell them to take their choice for that morning but that you may have to change the seating arrangements. Seat them alternately by grades or by "readers" if possible. You can then occasionally hear recitations at their seats and you can more easily supervise their seat work. You will soon acquire the habit of glancing along a row of pupils to see what work they are doing while other pupils are reciting. If you have never realized the fact that governing a school is made much easier by proper seating, or, if you have never seen troublesome pupils "managed" by changing their seats the results of so doing will be a surprise to you. The ordinary country-school seats are too high for beginners. Let them stand up by their seats when they want to do so. Occasionally running around the room on tip-toe is restful.

Before calling school the first morning, you will have written a tentative program on the board and any other work for the forenoon that needs board work. You may have stenciled the boards if you cannot draw.

Here is a program that has been in use in our township for some time. I am giving it, hoping it may serve as a tentative program for you. I hope you will not have all the grades. No teacher, however efficient she may be or however imbued with the principles of scientific management, can do justice to the pupils of all the eight grades at one

time. She need not neglect the same pupils all the time so that each can have a fair chance at what the teacher can do for him.

9 A. M.	Opening Exercises.
	Agriculture (Seventh and Eighth).
	Beginning Class.
	Fifth Reader (Sixth Grade).
	Fourth Reader (Fourth and Fifth Grade).
	Third Reader
9:55-10	Recess.
	Second Reader.
	Advanced History (Seventh and Eighth).
	Elementary History (Sixth Grade).
	Beginning Reading and Number class.
	Second Number Class.
	Elementary Sound Class (For those above third grade that can sound).
	Elementary Sound Class (For those above third grade that have never had elementary sounds).
10:55-11	Recess.
	Arithmetic Classes.
	Advanced Spelling (Sixth, Seventh and Eighth).
12 M.-1 P. M.	Noon Intermission.
1 P. M.	Orthography or Civil Government (Eighth Grade).
	Beginning Class.
	Second Reader.
	Third Reader or Language.
	Fourth and Fifth Language.
	Sixth Language.
1:55-2	Recess.
	Grammar (Seventh and Eighth).
	Primary Spelling (Third, Fourth and Fifth).
	Writing.
	Beginning Class.
	Second Reader.
	Third Reader.
	Elementary Physiology (Sixth Grade).
2:55-3.	Recess (Allow first and second grades to go home).
	Advanced Physiology (Seventh and Eighth).
	Fourth and Fifth Geography.
	Sixth Geography.
	Seventh and Eighth Geography.
	Primary Spelling.
	English Classics (Seventh and Eighth).
	Song or closing pleasure of some kind. Send them home happy.

Boards of Education usually furnish desk copies of the text-books in use. If they do not, you will, of course, use your own books. You cannot afford to do without them. For your first day you have planned what you will assign for your first lessons and have studied it well.

You will have prepared some interesting thing for your first opening exercise. You will continue each day to do so. This interesting thing may be a story, a fly or a bug or a berry; it may be a copy of a famous painting or sculptural work; it may be current events or sanitary science. It may be any one of a thousand things of interest. To the children? Yes, but first it should be interesting to you. The opening exercises may be made the most vital thing in the day's work and should be an example of the very best that is in you. One of your first problems to meet is how to make a subject interesting to the different grades. It works well to have kindergarten material and other seat work for the little ones when one is giving oral work to the older pupils. I find a small sewing table a great convenience to hold material for the little folks. After you have completed your opening exercises, assign the reading and history lessons and then take names, ages and grade of pupils and then have your beginning class. That is definite enough for the forenoon work. When noon comes if you have a temporary roll, have lessons all assigned and have heard a few of the classes, that is reasonable success. I am jealous for your recesses. Whatever other plans are upset or whatever may have been omitted, do *not* omit the recesses at each hour. That does away with so much confusion in leaving the room, getting drinks and sharpening pencils. These are "strictly business" recesses. If there is time for play after these things are attended to, it is all right. The windows should always be raised by pupils who are given that as their duty. They raise them as they march out at intermission, and if the weather is fit, they stay up all intermissions except the noon hour.

You will be able to follow your program the first afternoon. By the end of the first week your pupils will have learned the program until they move to and from class on signal without being called. By the close of the first month you will have all the necessary cleaning of the school house and many other improvements successfully finished. You could have it all done in a week's time but it is better to make haste slowly when it is such a tax on nervous energy.

I have found it to have a wholesome effect in my school to reduce all the mechanical hurts of teaching to a system. Pupils form in line in the yard and march into the school house when the weather is good. They always raise windows and march out. In calling and dismissing classes numbers are used. On *one* the class at recitation seat rises and the next rises at their seats. On *two* they both pass over the floor, one *from* the other *to* the recitation seat. There is no interruption of classes to ask questions or get drinks unless it is absolutely necessary. One of the chief

results that come from this is an increasing self-control. Some pupils do these things because they are compelled to do so but with more it is a joy. Your pupils are your most loyal supporters in any sane method of securing best conditions for them. That is what you are there for: to make better conditions for them. As your interest in them grows and as you lose yourself in your work you will be surprised at the returns you are getting individually. You cannot do good for others without being greatly benefited yourself.

I cannot leave this article without saying something of the order in the school room. You must have it. Do not let things go at sixes and sevens at first, thinking you can straighten out the tangle later. Nothing is farther from the resulting condition. If you control your school the first weeks your trouble is over. You will be saved that unseemly loss of dignity that comes about the middle of the term when you are trying to control your school and cannot. We are chiefly to blame when our pupils "throw us out" either literally or figuratively speaking. Stop any impudence or undue familiarity instantly—the first day if need be—or the last.

I have purposely delayed speaking of the beginning reading until the close of this article. If you have not already learned some definite system of teaching beginners to read, you are now trying to do so. Nothing so marks you as "a back number" or as unprogressive as lack of preparation for the primary work. There are several good systems of teaching reading. The important thing is to get a system and master it—make it your own so that you can defend it against all comers if need be. Maybe you yourself are not a good reader. That will not prevent your successful teaching of the subject. The fundamental principle of all the systems is a mastery of the elementary sounds as uttered by the human voice in speech; after that, an attempt at conversational expression and understanding just about sums up the process. It is a delightful thing to get such remarkably permanent results in such short time.

Finally, my brethren, a word for you personally. I believe in the young teacher. You have at least one thing ahead of us veterans—your youthful enthusiasm. You will most likely take the keenest interest in all that affects your school and its work. I hope you will soon be thrown in contact with other optimistic teachers. There are those of our profession that are soured on young people chiefly because of jealousy. May your path be clear of such folks. May you have good sense, judgment and tact to conduct your school to a successful finish. If you are definite in your daily preparation of your work, a year will find you possessing as high certificate as your experience warrants. I hope your year's work will be so successful that you will next summer attend summer school for a season of enlarging your circle of illumination. Live every day the best you can. It is all right to look forward to future attainments but you will miss the best of your life if your mind is always fixed on

future living. Live *now,* this very minute. Take your life and talents with you into the school room. Live there too. Too many teachers just barely exist in the school room. There is much expected of you in your community besides "keeping" the school.

All this for forty dollars? Yes, and as much more loyal honest service as you can give. I'll warrant you that you will not long remain a forty dollar teacher. I wish, though, that your raise in salary could come to you in your country school work rather than going into town or city schools to get it. But you are beginning in an opportune time. There has never been a time when the country schools are receiving the attention as now. There will be increasingly greater opportunities in the country districts. I wish the very best for you. I wish for each day to be happier than the last and may you have health and strength for a year of devoted service. You must feel you are in the philanthropist class for the service you will give cannot be paid for with forty dollars.

READING AND PHONICS.

By Miss Maude Moore, Canton, Ohio,

Superintendent of Primary Instruction.

Reading is a center around which the entire work of the primary school should revolve, and, when taught in the light of the new century, it includes sense-training, voice-culture, games and plays, imaginative work, reasoning, and character building. The avenues leading to and from reading are mainfold, and the best teachers of our country are seeing and using them.

A taste for good reading is an acquisition the worth of which is hardly to be overestimated. A wide difference exists, indeed, in children in respect to their inclination for reading, but there are few in whom it cannot be more or less developed by careful and judicious training.

No one will dispute, I think, that the acquirement of the art of reading constitutes at least half of any education; for, after all that may be done for him by others, the main work of educating any individual must be performed by himself; and reading so multiplies one's powers for the acquisition of both knowledge and culture that to over-rate its value would be impossible.

Learning to read, then, is the child's all-important task when he enters into school life. This task must be made enjoyable and interesting or the child's work is drudgery.

Learning to read, even the thorough mastery of the mechanism of reading, should be an exercise full of genuine pleasure for both the learner and the teacher.

First Year.

The teacher of First Grade pupils, little tots starting to scohol for the first time, should studiously prepare her daily task, for, than hers, there is no teaching more important from the Kindergarten to the graduation class in the University. There are no *more trying* days for a teacher than those first weeks, when a number of medium and bright minds—as yet unaccustomed to formal learning of any kind—are having opened up to them a new life. The experienced and conscientious teacher is fearful lest she may not proceed in just the right way; the inexperienced teacher is at an utter loss to know what or how to do.

How Do You Teach Beginners to Read?

No one question has been asked oftener by teachers than *"How do you teach beginners to read?"*

Reading is not always taught correctly in any grade, but the most difficult place of all to teach it (or any other branch, in fact), is in the First Primary Grade, and the hardest part of that year, the very beginning. It is not an easy task for the experienced teacher, and it is positively overwhelming to the inexperienced teacher.

Self-activity is the law of growth. The child's inborn desire is to act, and his love of play should be provided for by the introduction of lessons that are to be read silently and acted before being read orally. These action-lessons serve the double purpose of giving freedom and of creating the desire for silent reading. The children delight in action and conversation work, and it promotes spontaneity and relieves of self-consciousness.

A child's life is largely made up of action, and his birthright is free motor-activity. It is believed that games furnish a better field for the development of child nature than any other exercise ever employed in a school course. By means of them the power to think quickly, to judge, to act, as well as to learn politeness and self-restraint, can be unconsciously acquired.

That which spontaneously holds the child's attention will be the line of least resistance; therefore his play interests should be correlated with the school work.

The reading matter, then, should be full of action — the action of real life. Believing this to be true, the first sentence presented to the child should be one for him to act.

BLACKBOARD READING.

In teaching beginners to read, it is imperative that much time be spent in preparatory lessons upon the blackboard. No teacher of any experience at all, anywhere in this vast domain of action, would think

for a moment of placing a book in the hands of beginners until this blackboard reading had been thoroughly, conscientiously, and well done.

Believing, as before stated, that much of the work of children should be based upon action—the action of real life—the first sentence presented to the child should be one for him to act. For instance, begin with the imperative sentence *"Come."* Proceed something like this: *Write,* in a *very large* hand, the sentence above mentioned, on the blackboard, and call upon some child to *do* what it commands. If you happen to have in your class a pupil who was in the first grade the year before, call upon him to act the command. If you have no pupil in the class who knows the word, you may call one of the pupils to the front and have him be the teacher, and have him tell you to do what the sentence commands. Then *you act* the command by going to the *"teacher"*. The *"teacher"* says, "What did the sentence tell you to do?" You say, *"Come."* Have another pupil act as teacher and repeat. Then have one of the *pupils act* the command. By this time many of the pupils will be ready to act the command. Have *all* the pupils in the class act this command before taking up another. When a child has finished acting a sentence, say, *"That will do, thank you." He will know he is dismissed, and you will be incidentally teaching him manners. Erase a sentence every time a child acts it, and write it anew for each and every child. This gains their attention better, and the very fact that they watch you write it so often, causes them to visualize the quicker and better.*

In all the commands remember to *first, have the pupil read the sentence to himself, second, have him act the sentence, and third, have him read the sentence aloud. NEVER neglect to write your one-word commands with a capital letter and a period.* Always be extremely careful in writing your sentences on the blackboard to write not only in a large, legible hand (an absolute necessity), but to *ALWAYS* have the capitals and the correct punctuation marks in and at the end of the sentence. *Call attention to these marks constantly,* for it will help wonderfully in getting expression and meaning from not only the blackboard work, but from the book later. (It is also incidental language work.)

At the second lesson take another command such as *"Go."* Have two or three pupils act the command of the *first* lesson before introducing the command of this second lesson. In introducing this second command, have the *first* acted by a last year's pupil (or act it yourself as directed in Lesson 1), and while this pupil is standing by you—in obedience to the first command—write the sentence in this second lesson on the board and tell him to do what it commands. He says, as he proceeds to his seat *"Go."* Many others will be immediately ready to *play* these words. Have *all* the pupils in the class play this lesson, too.

In the third and other lessons proceed in the same manner with more action-words, such as *play, run, walk, fly, sing,* etc. When these words

have been used in one-word commands, make sentences of three words by using simply *"and"* as *"Come and go." "Come and play." "Go and walk."* etc., etc. Then, enlarge these sentences by introducing one or two proper names, as, *"Jack, come and go." "Run and play, Frank." "Come, May and sing."* In arranging lessons for beginners the teacher should be careful to preserve the continuity of thought. Mere isolated sayings scatter the interest, directing the mind first to one subject and then to another, thus diverting the attention instead of holding it.

After taking up about a dozen or fifteen words, the sentences should be largely sequential or conversational. This is done to bring out expression, and it is at the same time working from that which they know and can do to that which they do not know and cannot do. Nothing brings out expression and creates interest like conversational work—dialogues, some would call it. Have the pupils *look at each other while talking* the sentences. If you call it *talking* instead of reading the pupils will do better. This may seem strange, but it is true. Use the word "read" as little as possible at any time. Do every thing you can to make the children natural. Very frequently, have the pupils, taking part in the conversations, or dialogues, come to the front of the room while *talking.*

Such conversations as these are used:

(Reading and Phonics.)

1. May Jack go with me?
2. Jack may go with you.
1. May Frank play with me?
2. Frank may play with you.
1. Jack, may I sing?
2. You may sing.

(The figures indicate the speakers.)

Later, when more words have been learned, the conversations are longer, as,

1. Is sugar good to eat?
2. Sugar is good to eat.
1. Is sugar sweet?
2. Yes, sugar is sweet.
1. Are apples sweet, too?
2. Well, some apples are sweet.
1. Have you much milk?
2. I have not any.
1. Has Jack much milk?
2. He has a little, not much.
1. Did May sing?
2. I did not hear her.
1. She sings well.

2. Yes, I like to hear her sing.
2. I like to hear Jack sing, too.
1. Is sugar dear?
2. It is dear.
3. It is too dear.
4. It is too dear for *us* to eat.

This blackboard reading continues until the pupils have a reading vocabulary of about one hundred words. To some teachers this may seem to be taking too much time for the blackboard reading, but it more than pays in the end, as it gives the pupils greater power upon taking up the Primer or First Reader. "Make haste slowly" is a splendid motto for the teacher of beginners, especially during the first half of the year.

(*The Educational Publishing Co., Prairie Ave., Chicago, Ill., publishes a book called "Blackboard Reading" which contains all the sentences that are necessary for this reading from the blackboard, and which will very materially aid the busy teacher in this preliminary work necessary for reading ANY Primer or First Reader. It costs but 50 cents.*)

When this blackboard work has been thoroughly done, the pupils are ready for the Primer or First Reader of any good system that you may care to use in your school, such as the *Ward or Rational Method, the †New Education, or the ** Aldine. I would recommend that the basic books be those that are founded on a good system of phonics, as the more systematically the phonetic work is done the greater the power of the pupils to help themselves. This phonetic work should be begun the first day of school. It goes hand in hand with the blackboard reading from the very first, and continues with the work from the readers. All the systems before mentioned have Teachers' Manuals that fully explain just how to take up this work in phonics. This phonetic work should be most conscientiously taught during the first three years of the child's school life, at the very least. It gives him power by giving him a key to the English language; and, the better a child reads, the better he will do everything else, because he cannot study anything unless he can read; unless he can intelligently read the problems in arithmetic he cannot solve them; the better he can read, the easier it will be for him to get his language, grammar, geography, history, etc.

PHONICS.

Just a hint as to how to begin with this work! As before stated this work begins simultaneously with the blackboard reading.

* Published by Silver, Burdett & Co., Chicago, Ill.
† Published by American Book Co., Cincinnati, Ohio.
‡ Published by Newson & Co., New York City.

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The *first* step in this phonetic work is the teaching of the *sounds* of the letters, or combinations of sounds. Naturally, the the easiest sounds should be taught first, and the easiest are those that can be prolonged indefinitely, such as f, l, m, ā, ō, s, etc. A good order in which to take up these single and compound sounds would be something like the following:

(f, ph, gh) l, m, (ā, e) (ō, eau) eaux, r, (s, ç) n, (ē, ī) at, an, in, ing, ings, ight, ights, (ī, y) ail, ails, ill, ills, ate, (z, s) (k, c, q, ck) (t, d) (er, ar, ir, or, ur, ear) ers, p (ŏ, a) ă, (ic, ick) ip, im, ish, (ī, y) ly, d, (ŭ, o) ch, ĕ, ed, est, less, ness, sh, qu, v, (w, o, ōō, u, ew) (j, g) (a, ô) g, h, wh, (ou, ow) th, b, (n, ng) (o, ŏŏ, u) ful, (oi, oy) (ū, ew) ure, x, ex, ex, (âir, âr, êar, êir) ä, a.

I have found by years of experience that it pays, in this phonetic work, to teach at the *same time, all sounds* that are *alike*, as (f ph gh), (ē ī), (s c), (z s), etc. A good device, or schoolroom help, is to write or print on cards, to be tacked *on the wall,* these combinations of *like sounds,* having a separate card for each group. The pupils will be constantly visualizing these. Much time would be saved if more things than are, were placed on the schoolroom walls for visualization. Pupils could *almost unconsciously* learn many things if given the opportunity. Of course, these sounds are to be taught in class before they are placed on the walls. These are taught by means of cards, containing both the script and the print sound. Any company that publishes a phonetic system, prints these cards and sells them in sets, or packages, at a very small sum.

HOW TO CONDUCT A PHONOGRAM DRILL.

All Grades.

(I shall, below, tell you a good way to conduct a lesson or drill in the sounds, or phonograms.)

The *entire* class *stands.* The teacher stands in the *middle* of the *front* of the room, with the cards held *straight* in front, *rather high.* Place these cards from *back to front* of the package held in the hand, as quickly as possible to *not jerk* the cards. These cards are named by the pupils *individually—not as a class.* As soon as a pupil pronounces a sound he is seated. When *all* have finished the *entire* class stands again. If a pupil hesitates and does not say his sound *at once,* the teacher must *not* wait for him to think about it, but immediately call out *"Tell"* when the *whole class tells the sound at once. If a sound is given incorrectly the same thing is done. This exercise should be conducted briskly!!* Teachers must learn all these sounds well before trying to use them in this drill. Be absolutely sure of the sounds you present!! *Use both the print and script sides of these cards from the very beginning!!*

Be very careful in holding these cards *not to* turn them to the right or to the left—hold them perfectly straight—so that all of the pupils in the class can see all of the cards all of the time. Be careful that the fingers of the hand holding the cards do not cover any of the letters. *Do not move across the front of the room while giving this drill. Stand perfectly still, and as far in the front of the room as you can get.*

EAR-TRAINING.

Simultaneous with the teaching of the sounds should be the training of the ear to blend sounds to form words. (Many teachers make the mistake of beginning to blend words from the blackboard before the ear has had sufficient training in this running of the sounds together to form words. This impedes progress.)

I will illustrate by giving you a few ear-training sentences.

(The word to be blended—*f* AN.)

Have these sentences acted.

Please hand me that *f* AN.
Give the *f* AN to the little girl.
Use the *f* AN.
Give the *f* AN to the little boy.
You may use the *f* AN, too.
Give John the *f* AN.
Mary, tell him to use the *f* AN.
Bring the *f* AN back to me.

Why do I say to have these sentences acted? Simply because if the pupils are able to perform the commands, they have mentally blended the word. And, as children like to *do things* so very well, you can at once get their interest and attention by beginning with *action sentences.*

(The word to be blended—*f* OLD.)

Have these sentences acted by the entire school first—then by individuals.

F OLD your arms.
F OLD your hands.
Rise, and *f* OLD your arms.
F OLD your arms behind you.
F OLD your hands over your head.
F OLD your hands behind you.
Sit down and *f* OLD your hands.

(The word to be blended—*m* AN.)

Look at that *m* AN.
What *m* AN do you mean?
That *m* AN at the window.
Oh yes, I see the *m* AN.
That *m* AN is my father.
My father is a very good *m* AN.

(The word to be blended—*m* EAT.)

Frank is in the *m* EAT-shop.
He likes *m* EAT.
Do you like *m* EAT?
Yes, I like *m* EAT.
What kind of *m* EAT do you like?
I like any kind of *m* EAT.
This *m* EAT is tender.
Who cooked the *m* EAT?
Mamma cooked the *m* EAT.
She cooked the *m* EAT well.

(The word to be blended—*s* ING *ing*.)

May is *s* ING *ing* a song.
Jack is *s* ING *ing*, too.
The children are *s* ING *ing* sweetly.
They like *s* ING *ing*.
The bluebird is *s* ING *ing*.
The robin is *s* ING *ing*.
All birds are *s* ING *ing* in the spring.
We like to hear their *s* ING *ing*.

After hundreds of these sentences have been used, and the pupils' ears seem to have been pretty well trained to run the sounds together, spend some time in pronouncing the *phonetic words alone*—not in sentences—and have the pupils tell what the words are. When you have done this for perhaps a week or two begin the blackboard blend. This consists in writing the phonetic words on the blackboard and having the children blend and pronounce the words. In a very short time, the actual blending part of this process should be done inaudibly.

These blackboard blend words should be taken up in groups, or families, first. Here are a few families.

IGHT	AIL	ATE
f *ight*	f *ail*	f *ate*
l *ight*	m *ail*	l *ate*

m *ight*	n *ail*	m *ate*
n *ight*	r *ail*	r *ate*
r *ight*	s *ail*	s *ate*
s *ight*	p *ail*	K *ate*
t *ight*	t *ail*	p *ate*
pl *ight*	tr *ail*	pl *ate*
fr *ight*	fr *ail*	pr *ate*
	gr *ail*	cr *ate*

After having taken up a dozen or more families, write the words promiscuously on the blackboard, and have them blended by the class.

I'll give you an idea as to the best way to conduct a blend drill.

HOW TO CONDUCT A BLEND DRILL.

All Grades.

Have *written* on the blackboard *before* the opening of school each day, the phonetic words to be blended. (These words may be obtained from any of the Manuals that go with any of the Phonetic Systems.) They should be written *neatly, in rows,* and not too small. When the time comes for the blend drill, have the pupils stand and pronounce the words as fast as they possibly can, each child pronouncing but one word, and then being seated. *These words should not be SOUNDED aloud except in extreme cases.* They must be pronounced very distinctly and accurately. Do not pronounce the words after the children; they should be pronounced by the pupils so as to be heard by every one in the class. If a pupil comes to a word that he cannot pronounce, *do not tell him the word, and do not allow any pupil to tell him the word,* but let him stand until you have gone around the class; more than likely that by the time you have gone around the class, he having been quietly studying his word, can now tell you what it is without any help from you. If, however, he is unable to do this, have him sound the word aloud, running the sounds together as fast as he can, when he will soon be able to tell the word. If the word contains some sound that he does not know tell him the *sound only.* After helping all those that are standing, to get their words, begin over again and go around the class in the same manner. Go around the class in this manner as many times as time will allow. The teacher must watch closely throughout this drill. Do not accept a word that is almost right—*it must be absolutely correct.*

BOOK READING.

Having finished the blackboard reading the pupils are now ready for some Primer or easy First Reader. Some teachers will ask "How can the children read from the book when they have had nothing but writing from the board?" This transition from script to print is easy

if the teacher has had the "Sight-Word" Drill each day. This is conducted in the same manner as the Phonogram Drill, previously described. These "Sight-Words" can be purchased from the same companies that publish the phonetic systems. If you have a box of large rubber type you can make them. Cards of Manila paper, $5\frac{1}{2} \times 8\frac{1}{2}$ inches are used. But it is cheaper to buy them already printed. The words used in this Sight-Word Drill are those used in the reading from the blackboard. Add the words to the package for the drill only as fast as they are used in sentences in the blackboard reading. Use the *script and print* sides of these cards from the *very beginning*.

Do not stop the phonogram and blend drills when the pupils begin to read from the book—this work should continue for two or three years at least. If this work is conscientiously done you will be amazed how much and how well the pupils will read. The reason? They have a means of helping themselves. They have a "key to the language."

How many books shall the pupils read, in the first year, the second year, the third year, etc.? Who is wise enough to say? How can a limit be placed either as to the minimum or as to the maximum? One school reads many books, another few; there may be the same amount of time used by both. One school may be taught by an experienced teacher, the other by an inexperienced teacher. One school may be large, the other small.

One school may be made up of children from good homes, children that are well cared-for, well-fed, comfortably clad, children who get plenty of sleep. The other may be made up of children who have almost no care and attention, children under-fed, poorly clad, and who sleep on a pile of rags or straw in a corner of the room, or in a store-box on the street. Should as much be expected of the latter as of the former? One school may read twenty books, another five or two. If children can read twenty books well and with pleasure and enjoyment, should they be forced to read over and over again the same old few? Would it be as enjoyable, as interesting, as beneficial? It is really wonderful how much children can read after they have been given the power to help themselves. How are they given this power? By the systematic study of phonics, and by reading. Reading gives power for more reading!! It is no harder on teacher and pupils to read many books than it is to read few. To drag along reading a few books, the interest—if any exists—is so half-hearted that it becomes monotonous. If many books are read the interest and enthusiasm are always at high-tide with the consequent happiness attending.

After the pupils begin to read from books, the manner of conducting a reading lesson is about the same in all the grades. About the only difference is that during the greater part of the first year the pupils read but a sentence at a time, while after that they read a paragraph at a time. (We crawl before we walk, you know.)

I shall give some general directions to follow in conducting a reading lesson in any grade.

GENERAL DIRECTIONS TO FOLLOW CAREFULLY.

1. It should not be necessary for a teacher to stand in conducting a reading recitation from the book. (During the period when pupils are reading from the blackboard a teacher cannot sit during the reading period.) It pays better to put your strength into an enthusiastic tone of voice and facial expression than to put it into your feet.

2. When hearing a reading lesson (or any other lesson for that matter) do not say "Now, who can read so and so?" or "Who can tell me this?" etc., and then wait and wait before calling upon some one. More time is often wasted between times that pupils recite than is really used in recitation. Call upon pupils quickly!!

3. Be sure, always to have a copy of the book from which the children are reading. Otherwise you cannot detect errors.

4. Get the proper expression from a sentence or paragraph before leaving it. Never read through and through a lesson regardless of expression. It is better to read only part of a lesson and get the correct expression than to read it through several times with poor expression.

5. Some teachers are prone to read for the pupils in order to show them the correct expression. This should be the very last resort. The pupils can almost always get the correct expression if the right kind of questions are asked by the teacher. Reading for the pupil is perhaps quicker at the time, but he does not gain power for he simply imitates you, thereby becoming parrot-like. If he gets the expression himself he understands what he reads; if he gets the expression by imitation, you cannot know whether he understands or not.

6. Do not use the word "read" any oftener than is absolutely necessary. Instead of saying "Read the next paragraph, John," ask a suitable question or offer a fitting suggestion, that will call forth the correct expression of the next paragraph, or stanza. This helps to keep up the interest, too. Get into the spirit of the lesson—be enthusiastic—for it is contagious and the pupils will "catch" it.

7. Do not read "around" a class—call upon pupils in different parts of the class, or room.

8. Pupils are supposed to be reciting to and for the entire class—consequently they should speak loudly and distinctly enough to be heard and understood by every member in the class.

9. Be sure that the pupils stand straight—not leaning against anything—with the book held down from in front of the face.

10. Before beginning to read any reader, study carefully the directions for its use—given either in the front or back of the book—and then as carefuly follow these directions in using the same. Every good read is written with a specific purpose in view.

The subject of reading is being emphasized more and more, and rightfully so. The teacher of reading has a rare opportunity to project his influence into the years to come. Whatever else we do, we should see to it that the subject of reading is well taught. This is the test of good teaching, and the teacher who can do this successfully, is doing a work whose importance cannot be overestimated.

The advantages of reading—and of reading many books—is obvious. The child's vocabulary is increased gradually but surely, his store of literature is enlarged, his imagination is fed and strengthened, his ability to comprehend the subject-matter is increased, and he has, above all, cultivated a love and a desire for good reading, because he knows the happiness which may be his for the taking.

If books are read only as books, and the aim is simply quantity, the reading is simply a farce, and its value is practically nothing. If books are used that are beyond the comprehension of the pupil, the reading is worthless. But when the work is properly done, the material suited to the age and understanding of the child, the greater the number of books read, means a greater and a constant development of power in the pupil, an ability to find out for himself the beautiful in the world about him, the heavens above him, and in his fellow-creatures. And, above all, he can skillfully use the key which can unlock every door which leads to right living and a successful ending.

ANALYTIC AND SYNTHETIC READING METHOD.

(Copyrighted, 1912.)

By Frank S. Fox,

President of the Capitol College of Oratory and Music, Columbus, Ohio.

Pupils at first enter the school to learn to read, having accomplished this they then read to learn; or in fact to educate themselves. Education is drawing out the mind powers. To educate, it is necessary to feed the mind. As the seed in the ground must have proper food put into it, so it will develop and draw out more seed; so the elements of the mind must be fed so they will grow and produce more mind. The feeding process of the mind is Reading. You may classify the food as literature, science, mathematics, history, language, nature study or what you will but in the final analysis it is Reading.

Since mental life and growth depend on reading and its twin, thinking, it is important that the feeding process, reading, shall be the best. For this reason the best reading ability possible should be developed. Pupils should have positive instruction in Methods of study and practice, so as to attain a high degree of intellectual reading power.

Proper reading instruction and practice carefully drilled into the pupil's habits of study will develop rapid as well as accurate and retentive reading power. The present methods of reading require altogether too much time scanning the page to get what is there and thus the pupil has no time left for thinking, and digesting. These latter are necessary for education and are conducive to mind growth.

Nearly all pupils give more than enough time to the page to get perfect lessons; the trouble is they have no positive, concentrated method of procedure. After the pupil has once learned the art of how to read, from one to two minutes ought to put the thoughts of any ordinary well written page of history, literature, civics, pedagogy, psychology, etc., into the mind.

This method of reading when once mastered will bring this result. No artisan tolerates such haphazard methods of learning a trade as are now used in some schools for studying a lesson.

It is not less in courses of study we need so much to relieve the pupils, as it is better training in "How to Study."

The suggestions in this article have been successfully used by the writer in his teaching in the country district school, the academy, the college, the theological seminary, and the special school.

METHOD.

To be a good gatherer of thought from the book the Reader must have his observation trained to see accurately at a single glance a *language unit.* This language unit is a Thought Sentence, that is, a word or group of words conveying a single thought.

This Thought Sentence has at least one word in it which is of more importance than any other word.

When expressed orally this word or words always receive the Emphasis. It is called the *emphatic word.*

The following familiar poem by William Christopher Sayrs entitled "Papa's coming," will illustrate the principle:

He *swung* on the gate | and *looked* down the street |
Awaiting the sound | of *familiar* feet |
Then *suddenly* | came to the *sweet* child's eyes |
The *marvelous* glory | of *morning* skies |
For a *manly* form | with a *steady* stride |
Drew *near* to the gate | that opened *wide* |
As the boy *sprang* forward | and *joyously* cried |
"Papa's Coming." |

The *wasted* face | of a *little* child |
Looked out at the *window* | with eyes made *wild* |
By the *ghostly* shades | in the *failing* light |
And the *glimpse* | of a *drunk* man | in the *night* |

Cursing | and *reeling* | from *side to side* |
The *poor* boy | *trembling* | and trying to *hide* |
Clung to his Mother's skirts | and *sighed* |
"Papa's Coming." |

The Author's reason for writing this poem is to present to the reader two pictures in sharp contrast. To do this the words must be grouped around the emphatic or monumental word in such a way as to carry the lines of contrast through the two stanzas so that each successive emphatic word will add a new consistent important element to the picture. In the first stanza the words that paint the picture of the boy directly are "swung," "looked," "awaiting," "sweet," "sprang," "joyously," "Papa's Coming." Those of primary importance in painting the picture of the man are "manly" and "steady." The words of secondary importance in giving background and tone to the picture as a whole are "familiar," "suddenly," "marvelous," "morning," "near," "wide." The word grouping for each of these emphatic words is shown in the poem by the perpendicular lines.

In good, rapid reading the mind must be trained to make these groupings, at once accurately and without hesitation, and the eye must be trained to see them instantly, and in their entirety. There can be no good, rapid, accurate reading, either silently or orally without this mental and visual education.

In the second stanza the Thought Sentence and emphatic words are those which will produce a picture in striking contrast with the one to which the first stanza points.

The Thought Sentences are indicated by the perpendicular lines. The emphatic words of primary importance which bring out the picture of the helpless child are "wasted," "little," "wild," "poor," "trembling," "Papa's Coming." Those of primary importance which paint the man's picture are "drunk," "cursing," "reeling," and "side to side." The words of secondary importance which give background and detail to the picture are "window," "wild," "ghostly," "failing," "glimpse," and "night."

The words primary and secondary will suggest that all emphatic words are not of equal importance and so they are not and the reader then must not treat them of like importance. If the reading is silent the emphasis is a mental impulse; if oral it is a vocal contrast. Since the emphatic words are not of equal importance it must follow that the Thought Sentences are not of the same grade. Here the contrast is made by mental discrimination, if the reading is silent; and by modulation and stress, if the reading is oral.

To illustrate the principle further take these familiar lines from Longfellow's poem "The Day is Done."

The day is *done* | and the *darkness* |
Falls from the wings of night |
As a *feather* is wafted downward |
From an *eagle* in its flight |

I see the *lights* of the village
Gleam | through the *rain* | and the *mist* |
And a feeling of *sadness* comes o'er me |
That my soul *can not resist.* 1

A feeling of *sadness* | and *longing* |
That is *not akin* | to *pain* |
And resembles *sorrow* only |
As the *mist* | resembles the *rain.* |

There are only three distinct thoughts in these three stanzas. They are "time," "weather," and the "man's condition." The time is night as expressed by the phrase, "the day is done;" and weather as suggested by "rain" and "mist," and his feelings as told by "sadness." All the rest are auxiliary; that is, they help to augment these three thoughts.

The minor emphatic words are "darkness," "falls," "feather," "eagle," "lights," "gleams." They help to emphasize the thought "night." There are no auxiliary words describing the weather. The auxiliary words describing his feeling are "can-not-resist," "longing," "not-akin," "pain," "sorrow," "mist," "rain." The perpendicular lines show the divisions into Thought Sentences. In order to read and get the thought accurately it is necessary to make these word groupings correctly.

We speak of the "Thread of Thought," or "Line of Thought." In other words we mean the author has a story to tell and he uses the words of the composition to tell that story. To read his story one must be able to travel the writer's mental road; and travel it accurately. If the reader is unable to travel this mental road he is not able to read the production.

This mental road is marked by the monumental words, or emphatic words. These emphatic words with their auxiliary words constitute divisions on this mental road.

This division I have called a "Thought Sentence," and this Thought Sentence must be seen at a single, quick glance. This Thought Sentence is sometimes called an "oratorical word," because this group of words is used to express a thought.

You can not be a quick accurate reader unless you can see the group of words which constitute the Thought Sentence, quickly and accurately. It is just as easy to educate yourself to do this as it is to educate yourself to see a word with several syllables.

For example your eye takes in at a glance the word "disinterestedness." Now this word is larger than the Thought Sentence "The day

is done." Also the Thought Sentence "and the darkness" is just as large as the word "geographically." The word you see as a complete picture; why not the Thought Sentence? It is a matter of education, that is all.

Pupils should be trained in reading to use this larger vision. This will lead to accuracy and a larger capacity for work; and by the time they reach the High School they can get the Thought of the text by a single reading of the lesson; and will then have some time left to *think it over.*

OBSERVATION.

First:

The usual way of expressing thoughts is affirmatively. When we want to speak negatively the words of negation "no", "not", "neither", "nor", etc., are used. These words are then as a rule always emphatic and are joined to the word or words they modify thus constituting the emphatic part of the Thought Sentence.

Second:

Advance Reading cannot be taught in its entirety, say from the Fourth Grade up, unless the teacher understands some rhetoric. Figures of Speech are used to express more accurately and positively the thought and hence they are important factors in determining the word groupings for the thought sentence. The figures of speech that most frequently affect grouping are simile, metaphor, personification and climax.

PAUSES.

Pauses in reading or speaking are addressed to the ear of the auditor. They are for the purpose of making clear and impressive the thought. These pauses are determined by the Thought Sentence and the emotions; not by the punctuation marks. The comma, semicolon, colon and period, mark grammatical divisions in the composition; and the dash, interrogation point, and exclamation point determine the emotion and inflections; and the underscore, and quotation marks show emphasis. It is true that many pauses are made where the grammer points are; but the Thought Sentence determines the place of the pauses, the grammar points do not. There must be a pause made after each Thought Sentence, for this determines the word grouping for the auditor. These are the pauses for the thought. Pauses for effect or impressiveness may occur almost anywhere. The judgment of the reader or speaker determines these. They vary greatly, as does the length of the pause. The Interrogation and Exclamation Points determine inflection to show the writer's meaning and emotions, as said above and do not mark lengths of pauses. The Dash, Interrogation, Exclamation, Quotation Marks and Underscore belong to oral reading.

SELECTING LESSONS.

Lessons for the reading class should be selected with reference to teaching a certain principle. I have not found a school book in which the lesson could be assigned one after the other beginning with the first and do each class justice. Some lesson had to be put first in the book but this is no reason for reading it first. Before the lesson is read the pupils should be questioned as to the line of thought to be developed, and pictures in it. For example take the following extract from Thanatopsis.

> The hills rockribbed and ancient as the sun,
> The vales stretching in pensive quietness between
> The venerable woods, rivers that move in majesty
> The complaining brooks, that make the meadows green
> And poured round all, old oceans, gray and melancholy waste
> Are but the solemn decorations all of the great tomb of man.

Here is a picture, complete, beautiful and comprehensive. It was not penned as a grammatical specimen to be parsed. Nor are the words of so very much importance; it is to teach a great truth. If the pupil does not get the picture of this great painting and its import the lesson is lost.

The outline of the picture is a figure of speech—a climax. The steps of the climax are the hills, the vales, the venerable woods, the rivers, the complaining brooks, old ocean's, all. These steps are colored as follows: The hills is modified, by, rockribbed and ancient as the sun; the vales, by stretching in pensive quietness between; the venerable woods is not modified; the rivers, by that move in majesty; the complaining brooks, by that make the meadows green, old ocean's, by gray and melancholy waste; and all the preceding are modified by poured round all, old ocean's gray and melancholy waste; and these all taken together comprise, "the solemn decorations of the great tomb of man." In short the picture drawn is one of the continents and islands with their varied colors and chiseled faces, constituting the last resting place of all that is mortal of man. This must be grasped as a complete picture then it will be remembered and can be described. When you look at a great picture painting you look at it as a whole, then it is studied minutely, or in its parts. And so you should enjoy the great word paintings of literature. In reading this great word picture from Thanatopsis it should be grasped first as a whole and then the principal steps and their modifiers should be noted.

In reading it orally the step divisions should be noted by pauses, their progress as a climax and the modifiers of the steps should be pointed out by modulations. In oral reading the noting of these steps and their modifiers is addressed to the ear of the auditor, in perusing they are addressed to the eye. A good oral reader is a good silent reader, but the reverse is not always true. All the vocal elements of oratory are necessary for good oral reading.

READING AS A FINE ART.

There is no greater accomplishment than to be a fine reader. The ideal should be oral reading; for in traveling to this ideal you acquire every element for perusing or silent reading.

In oral reading the whole of the individual's trinity life must be trained; voice, body and breathing; intellect, will, and feeling; mind, soul, and spirit; and also art, science, and literature. The education of the whole individual is demanded; as well as every kind of study is required.

What accomplishment equals this? Yet, there are still a few so-called educators who depreciate the idea of emphasizing oral reading as a Fine Art.

Then there is its place by the fireside and community gatherings. Good readers in the home promote home life. It is even as important as music, if not of greater. Music appeals to the emotional life almost entirely; while reading appeals to the intellectual volitional and emotional, if it is used in its entirety. Only a few seem to be able to use music acceptably, while almost every one can be a good reader. And thus every life in the home is touched. Bishop Simpson says reading has twenty times more use than music. To get the best results in training for good reading, if you do not begin till the Fourth, or Fifth Grade you must go slow.

The writer when teaching in the district school began in the Fifth Grade. The first poem we used was Longfellow's classic, The Village Blacksmith. Two weeks with a lesson a day were spent in finding the Thought Sentences, and the Thought Monuments; and then drilling on the emphasis, pauses, modulations, inflections, etc., and grasping the pictures which the poet artist has drawn in the poem. And when we left it the eight boys who constituted the class would revert again and again during the term to this poem. They enjoyed the poem.

What can be done with this selection can be done with other literature. The Village Blacksmith is in fact quite a perfect production. It has an introduction, a discussion, and a conclusion. It begins with the physical and ends with the metaphysical. It begins with the concrete and ends with the abstract. The following is its analysis. The Thought Sentence divisions are indicated by the perpendicular lines and the Monumental or emphatic words by the italics.

The introduction is,

"Under the spreading chestnut tree,
The village *smithy* stands |
The *smith*" |

The important pictures in the introduction are suggested by the words "smithy" and "smith". The former is the shop and your fancy can paint this as you may wish. The latter is the man and this is the

subject for discussion and the poet paints this picture for you. The first line of thought describing the man, is that of physical strength, the following being used by the poet artist to paint the picture for you.

"a *mighty* man is he |
With *large* | and *sinewy* hands |
And the muscles of his brawny arms
Are *strong* | as *iron* bands." |

"Mighty", "large", "sinewy", "strong" and "iron" are the monumental words denoting strength. Note that "strong" which is a weak word is built up as it were with the simile "as iron bands." This is the author's evidence that strong is preferred to brawny as the monumental word.

The line of thought now changes from physical strength to physical appearance. The section is,

"His hair is *crisp* | and *black* | and *long* |
His *face* is | like the *tan* |

Here "crisp" needs attention. It means curled; that is, the Man had long, black, curly hair.

In the next line "brown" is a weak word understood after "is." Were it there the simile, "like the tan", would modify it but since it is not there the simile modifies face, giving to us a more accurate picture.

The line of thought now changes to the metaphysical life of the man. The author discusses his character, beginning with his honesty. The words used are

"His brow is wet with *honest* sweat |
He earns *whate'er* he can |
And he looks the *whole world* in the face |
For he owes *not any man* | "

In this line of thought "whate'er" is the weakest monumental word. Notice also that "whole world", and "not any" are phrases comprising the monumental words. Where there is a phrase two or more words used and the phrase means what a single word would mean and that single word would be the monumental word, then the phrase is the monumental word. In the above phrases "all" could be used instead "whole world" and "no" instead of "not any".

Again the line of thought changes, the character of the man is described with reference to his industry. The words used for this description are

"Week in, week out, from morn till night
You can hear his bellows blow |
You can hear him *swing* his heavy sledge, |
With *measured* beat | and *slow* |
Like a *sexton* ringing the village bell |
When the *evening sun* is low." |

The first monumental word in this line of description is

"Week in, week out, from morn till night,"

The idea is that he labors during all the working hours, that he is not a loafer; and these words mean *constantly,* or *continuously* and since this word would be the monumental word the whole line is emphatic. The next monumental, "swing," is a figure of speech, it is a trope.

This is poetry; and he is the best poet who is the best suggester. Next the poet proceeds to tell how he swings the sledge, with "measured" and "slow" beat. But these words would not bring out the picture very forcibly so the poet uses another simile

"Like a *sexton* ringing the village bell,"
at a certain time, "when the evening sun is low."

He borrows his figure from the colonial times when there were very few timepieces and so the bell was used to tell time as well as announce certain news; such as a fire, a child lost, a wedding, a death, a funeral, time to go to bed, time to get up in the morning, time to quit work, "when the evening sun is low." These were all told to the people by a certain kind of ringing of the bell. And so the sexton was an important personage.

The line of thought now changes and the poet gives the reader a picture of the "smith's" social standing as estimated by the children of the community who are often the best of judges.

The words used are:

"And the *children* | coming home from *school*
Look in at the open door |
They *love* to see the flaming forge |
And hear the bellows *roar* |
And catch the burning sparks that *fly* |
Like *chaff* from the threshing floor."

Here is confidence in a good man; the children may well be trusted in his presence. A man honest, industrious, no profanity, no smutty stories, no lout. When it was more dangerous for children to be away from home than now, and their going and coming had to be watched closely, and the last admonition of the teacher was "Children go straight home," because men were not as much to be trusted as now, and there were dangerous prowlers, and great forests in which to get lost, it was necessary to know just where the children were, hence they heard "Go straight to school" and "Go straight home." But Longfellow intimates that the children were accorded here a special privilege, because the man was trusted and the children liked to see him work. The first monumental word is "love"; it shows the children's attitude. The next monumental word is "roar"; and the next monumental word is "fly." This is

a weak word, it is not accurate enough for the poet's picture so he builds a simile on it, "Like chaff from the threshing floor." The children do not try to catch the sparks that are hot and heavy, that drop near the anvil and would burn; but those sparks that fly to the uttermost parts of the shop. The poet sees his simile in the old threshing floor; when the grain was knocked off the stalk with flails or tramped off; and there were no fanning mills; and so the farmer had to wait till the wind blew strong through the barn and the chaff would be blown far away from the grain, when with shovel the farmer tossed grain and chaff together high into the air. A beautiful and instructive picture.

The thread of thought now describes his religious life, and the language used is

"He goes on Sunday to the *church* |
And sits *amongst* his boys |
He hears the parson *pray* | and *preach* |
He hears his *daughter's* voice |
Singing in the village *choir* |
And it makes his heart *rejoice.* |

The monumental word "church" shows where he spent part of the Sabbath to develop his eternal life. He was not a street corner loafer nor lazy Sunday morning lounger. "Amongst" shows he was interested in others besides himself. Instead of taking his place in the "amen corner" as was done in those early days by most of the religious leaders he still was interested in the boys. Not necessarily the boys alone of his immediate family, but rather the boys of the community who visited him at the smithy. "Pray" and "preach" show he was attentive to the efforts of the parson, which attention is a cardinal virtue. "Parson" is not a monumental word because that is implied in the word "church." "Daughter's" and "choir" tell us he was attentive to this part of the service also. The author here shows us that a good man's family is honored, for it was an honor to sing in the choir.

We are now given a glimpse of his sympathetic life as shown by the lines of the poem:

"And it makes his heart *rejoice.* |
"It sounds to him like his *Mother's* voice |
Singing in *Paradise* |
He needs must think of her *once more* |
How in the *grave* she lies |
And with his hard, rough hand
He wipes a *tear* from out his 'eyes." |

"Rejoice" shows he has a fatherly feeling for his daughter's success, and that she resembles her Mother. "Sounds" is the next monumental word as indicated by the simile "like her Mother's voice." The monu-

mental word "Paradise" tells the reader that the Mother was a good Mother and that she has been called to her heavenly reward. *"Once more"* means *again* which would be the monumental word and so "once more" is the emphatic word. He has thought of the wife and Mother many times since he put her in the "grave"; but on hearing the daughter sing he is reminded of her again. The next emphatic word is "tear" this shows a beautiful lingering sympathy for his life companion who has left him all too soon. "Hard" and "rough" are already implied in the picture of the man and need not be given prominence here. This ends the discussional division of the poem. The next part is the conclusion, or summing up of the picture parts.

Toiling | *rejoicing* | *sorrowing*
Onward through life he goes |
Each morning sees some task *begun* |
Each evening sees its *close* |
Something *attempted* | something *done* |
Has earned a *night's* repose.

This conclusion is not as complete as if it were an argumentative discourse. It deals only with his industry and then with his sympathetic life, and omits all the other lines of thought. The monumental words summing up his industrious life are "toiling," "onward," "begin," "close," "attempted," "done." His sympathetic life is in the monumental words "rejoicing," "sorrowing." "Night's" suggests a reward. The rest of the poem is an *addendum*. A good lesson has been taught; the reader has been benefited by a study of the work and life of the smith. It is quite befitting that the recipient should show gratefulness for the help bestowed.

Thanks | thanks to *thee* my worthy friend |
For the *lesson* thou hast taught |
Thus at the flaming forge of *life* |
Our *fortunes* must be wrought |
Thus on its sounding anvil *shaped* |
Each burning *deed* | each *thought* |

Thus the poem has been completed; the smith's worth has been set forth; the picture has been painted; the lesson has been taught; the story has been told; and the readers will be benefited. Blessings on our great poet!

LANGUAGE.

By Miss Lillie A. Faris.

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Language in the elementary school, more especially in the first two years, is so closely related to all other subjects as to become a part

of each period. No lesson in any line of work can be given without becoming a lesson in language. It, therefore, behooves the teacher in these early years to be careful in the choice of sentences. At all times, in the presence of children, the teacher should use clear, concise and elegant English.

The Wise Man has said, "Words fitly spoken are as apples of gold in pictures of silver."

Dr. Hinsdale gives this beautiful thought, "The artist in words is the greatest of all artists."

Dr. Rurick N. Roark adds his tribute to the study of English when he says, "Drill in fluent correct and refined English should begin for each pupil the day he enters school and should be the last thing done for him when he leaves the university."

If all thoughts, however, of great writers, save one, were to be eliminated from our minds in connection with the treatment of language, we would perhaps be constrained to cling to the sentiment of Cooley when he says, "To keep close to the heart of a child, and to encourage the expression of his own vital thoughts and feelings is real language teaching."

Our teaching of language to-day is weaker than that of any other study, and if we teachers would keep before us this thought of Dr. Cooley's, surely greater success would crown our efforts.

There is perhaps no one single element that has so much to do with the refinement of English as that of literature. And so, through this simple course outlined for the first four grades in school, we are correlating the language and literature and nature study, — one is a complement of the others, — neither complete in itself.

There are two aims for the teacher to keep in view. First, she must seek to enlarge and enrich the child's thought-power. Secondly, to beautify and refine his language. Every word added to the vocabulary in the teaching of reading, every thought which a sentence imparts is of the greatest importance in the treatment of this subject. Every word spoken in the hearing of children tends to uplift or degrade. Then how careful must the teacher be in her own choice of words!

OUTLINE FOR FIRST YEAR.

Of the mechanical work here, little need be said, as it will all be devoleped in connection with the work in reading; the punctuation, capitalization, etc., will be taught as necessity demands.

A teacher, in writing simple sentences upon the board for the children's reading, will of course always begin these sentences with a capital and close with the proper punctuation. Much depends here on the teacher's carefulness as it will react in the child. If the teacher in a careless manner writes sentences upon the board omitting the punctua-

tion, it follows as certain as the night the day that what written work is required of the child will come without the necessary punctuation. All necessary mechanics may be taught in connection with reading.

When, for instance, in reading the sentence is, "This is John's sled", the child sees for the first time the word "John's". Then it is that the teacher should take time to explain what the apostrophe and s mean. Then it should be used in connection with the names of the children in the room and practical application of it should be made until there be no doubt as to the children's understanding its meaning.

Mechanical Work: Teach the use of the capital as the beginning of the first line of every sentence, its use in the beginning of proper names; the period, the comma in its simplest use, the interrogation point, quotation marks, the apostrophe in its use of an omitted letter such as would naturally come in the child's vocabulary in the words don't, hav'n't, can't, etc., etc. By the end of the first year, then, the child should be able to master all the words used in the ordinary first reader; that is, he should be able to read intelligently this first reader and any number of supplemental readers, he should be able to use in oral and written sentences any word of the vocabulary employed in this reader. This need not limit the teacher in any way as to the number of words in the child's vocabulary because the up-to-date teacher will at all times be using from stories employed for the season, certain words which the child would not have gained from the use of a reader, such as the words, Pilgrim, Mayflower, Thanksgiving and others from the stories of the Pilgrims; Christmas, Wise-men, shepherds, angels and others from the stories of Christmas time, so there is no limit to be set.

As to cultural work, it is necessary for the teacher to keep before her the Child, the Aim, the Material and the Method.

I. THE CHILD. The child needs to be kept in mind, because expressions concerning things which come in his own environment will more readily come to him than those which are foreign to this environment. Hence, a study of the things that he especially loves will be of the most vital importance. "I will study the child and he will teach me how to teach him."

II. THE AIM, as already given is to increase and refine the child's vocabulary and to develop his thought-power.

III. THE MATERIAL: Many and varied are the sources of material for this work. The seasons, as they come and go, indeed all nature stands with overflowing hands offering abundance and all sorts of material and saying, "Come, take what you want."

History is resplendent with rich material for character-building, biography and stories that will not only give the child food for thought but will also have its effect upon his life.

Literature abounds with the most beautiful in thought and sentiment and there is nothing that so strongly appeals to little children.

Children love beautiful thought, hence from literature we choose the best in song, in story and in poem.

IV. THE METHOD:

The study of the child will largely determine the method. Children love to talk and when the teacher gets "close enough to the heart" to introduce free and easy conversation with him about the things in which he is particularly interested, she will have opened wide the door of this cultural subject.

We mention some plans which bear the stamp of experience and which will help to refine and increase the child's vocabulary.

a. Conversation lessons: Talk with your children about seasonable things. For instance, the day is rainy. Urge them to tell you what good the rain does; where it comes from; help them to understand the great need for water and that without rain this need could not be met; get them into the spirit of smiling instead of frowning at the rain, and at the close of the conversation lesson, lead to the memorization of such a verse as

"The little raindrops only say
Pit, pitter, patter, pat,
When we play on the outside
Why can't you play on that?"

Or to the singing of such a song as

"Two little clouds one summer day
Went flying through the sky
They went so fast they bumped their heads
And both began to cry."

Flowers, birds, bees, animals, sun, moon, stars, clouds, anything in the environment of a child is a fit subject for this conversation lesson.

b. Stories for reproduction: With real little children, the stories should be simple, full of life, containing a few sentences, such as the story of "The Fox and the Grape," "The Dove and the Ant." However, very soon, longer stories with more detail may be given. (See list at close of the grade work for suggested Story Books.)

c. Memory gems: The selection of gems for the school is largely a matter of individual taste of the teacher. Some of these may have moral tendency, such as the golden rule and

"Children, do you love each other,
Are you always kind and true,
Do you always do to others,
As you'd have them do to you?"

"If you're fretted and cross,
And quite at a loss
To really know what is worth while,
Find somebody who
Is worse off than you,
And see if you can't make him smile."

Or they may contain some thought of the time and season: as short thanksgiving selections and Christmas, or it may be something from nature that will create wonder in the child's mind as,

"There is a silvery moon, a-floating, floating up so high
There is a fairy crew a-boating, boating in the sky."

or

"Tell me, sunny golden rod,
Growing everywhere
Did fairies come from fairy-land
And make the dress you wear?"

During the year it is well for the children to commit some one or more beautiful poems from Robert Louis Stevenson, from Field, Longfellow or from any of the classics that one may choose.

d. Blackboard sentences: These may be written by the child as any new word is added to his vocabulary. Any blackboard lesson arranged in simple sentences from the stories which the teacher has told or from any connection with the Nature Study or Agriculture which she may be giving. Sometimes these sentences are composed by the children themselves; sometimes by the teacher, but always they should be read and whenever possible copied by the children.

e. Imaginary pictures: Have children close eyes, give some bright bit of description, either in poem or prose, have them open eyes and tell what they "saw."

f. Dreams: Have children lay heads on desks, close eyes and dream, wake up and tell dreams.

g. Pantomime expressing true thought: Tell a short story or read a short poem and have children impersonate the characters of it and in pantomime the thought of the selection.

h. Study of pictures: Oral description of pictures which are placed in the school-room or which may be handed to the child just before recitation period.

i. Dramatization of stories: Stories may be either short or long; let the children impersonate the people or objects and express the thought of the stories by words and actions also. Stories of animals or inanimate objects may be given in this way and children love to impersonate them.

j. Politeness: Play games representing children talking to their eld-

ers, asking and answering questions, calling for telephone connection games for correcting such expressions as "haint got." Teacher proposes playing a new game today. Call the game "I have none or I hav'n't any," or the "game of borrow and lend" and open the game by saying, "Let's play a little game of borrow and lend. I am going to ask you to lend me something. 'James, may I have your red coat?'" And James' correct reply is, "I have no red coat." Other games correcting misused words may easily be planned and the effect is so much more gratifying than is merely the correcting of wrongly used words. The games, "It was I," "Was it He?" etc., may be used to the same good end.

k. Birds, animals, flowers: arrange other games in which children describe themselves as some particular kind of animals, bird or flower and other children guess their names. For instance, a child says, "I am a big bird, my feathers are brown, I have great round eyes, I fly out at night." By this time every child in the room will be ready to answer, "Owl" and the one that is called first and answers correctly is the one to stand up and picture himself as some kind of a bird or animal.

A Term's Work: Aside from the plans here given there is afforded by each season its own particular line of thought-development. In the fall of the year, the study of Indian life naturally comes in order that the teacher may show to pupils the condition of our country, and the people inhabiting it when discovered by Columbus (which subject suggests our study for October), and later, when settled by the Pilgrims (this in turn suggests our language study for November).

For Indian study there is nothing that equals the Song of Hiawatha, however not all of it is usable, and not all is needed. It remains for the teacher to use her judgment in adapting such parts as meet her pupils' needs. As a usual thing, the study includes all thought through the childhood and up to the time when Iagoo, after Hiawatha has killed the deer says, "Hiawatha, you are a man now."

Children love Indian lore and for that reason studies and stories which will come in connection with the Song of Hiawatha will not only add to the great store of thought but will also help in the expression of the same. Nature stories as "How the Robin Got Its Red-breast", "How the Beaver Got Fire From the Pines", "How the Wood-pecker Got His Red Head", and "The Gift of Corn", (this last story and others of like character may easily be turned into splendid lessons on agriculture), will afford material for language work for many days. Fairy tales, myths, legends should be used in order to cultivate the child's imagination; history stories, such as "Little People of Other Lands", the stories of Pilgrims and of the Indians will be the most beneficial when he comes to study real history and geography.

In the treatment of all our language work, let us keep this thought before us, that there is no expression without impression. Let us remember this, in the giving all our work to the little people of the first

grade, that we are to enlarge and refine the child's vocabulary and thus to beautify his language.

Suggested Books.

Sarah Cone Bryant's "How To Tell Stories to Children."
Sarah Cone Bryant's "Stories To Tell to Children."
"Stories in Season."
"Fifty Famous Stories Retold."
Laura E. Richards' "The Pig Brother."
Longfellow's "Hiawatha."
Whittier's "Child Life."
Kate Douglas Wiggins' "Story Hour."
Lansing's "Fairy Tales."
"Hiawatha Primer."
"Seven Little Sisters."
"Around the World." Book I.
Lovejoy's "Nature in Verse."

Suggested Poems for the First Year.

"Wynken, Blynken and Nod", Eugene Field.
"My Shadow", Robert Louis Stevenson.
"The Children's Hour", Longfellow.

SECOND GRADE.

The outline here is only an extension of first grade work and all plans there used may be emphasized and extended in this grade. More of the formal needs to be added here, the stories for reproduction may be longer, and some of this may be done in writing. This work is also correlated with Nature study, with agriculture, with literature and whenever one of these lessons is given, the reproduction of it in oral or written language will prove to the teacher whether the impressions made have been the right ones or not.

a. Formal work: Writing of sentences from dictation. These should be based, of course, on words in the child's vocabulary.

b. Teach the capital letter in all its uses, names of persons, places, people, cities, towns, days of the week, months, first lines of poems, etc.; all the work in punctuation from the first grade reviewed and strengthened by the teaching of the comma in more of its uses, the exclamation point, etc. Teach here correct usage of verbs and words frequently misused, and do some real letter writing. Abbreviations of days of the week, months, Dr., Mr., Mrs., A. M., P. M. and others as necessary.

c. Dramatization: Stories from the reader, or those which are told by the teacher afford plenty of opportunity for dramatization and there is no avenue of expression which delights and aids the pupils

more. Whittier's, "In School Days", Longfellow's, "The Children's Hour", "A Leak in the Dike", "The Little Sandpiper" and "Liberty Bell" and other poems that are full of life are easily dramatized.

d. Pictures: Wide use of pictures in this grade to aid power of description. Allow children to occasionally write descriptions of pictures and often orally describe them. Often also read or quote bright bits of verse or description to them and let them imagine the picture.

e. Stories containing the simpler words of the child's vocabulary should be reproduced in writing.

f. Watch the language of the playground in order to correct all misused words.

g. Short memory gems appropriate to the season or the day may be given frequently and many beautiful poems read and a few of these memorized during the year.

The following are all splendid for this grade:

"How Do Robins Build Their Nests."
"The First Snowfall."
"The Bare-foot Boy."
"The Children's Hour."
"Out to Old Aunt Mary's."
"In School Days."
"Fawn-footed Nannie."
"Jack Frost."
"Caterpillar."
"Little Boy Blue."

Suggested Books for the Teacher.

Those mentioned in first year.
"The Pig Brother," by Laura E. Richards.
"Our Country in Poem and Prose."
"Black Beauty."
"The Strike at Shane's."
"In Mythland."
"Around the World," Book 2.
"Robinson Crusoe."
"The Tree Dwellers"
"The Cliff Dwellers."
"Early Cave Men."
"How Plants Grow."
"Short Stories of Our Shy Neighbors."

THIRD GRADE WORK.

The work in this grade also will be correlated with that of other studies and will be a continuation of that done in the first and second

grades. Different material as to subject should be given but the same general aim kept in mind—that of directing and aiding the child's thought-power in its development and helping him to gain easy control of expressive and refined English.

a. The reproduction stories continued: While much written work may be asked for in this grade, it is not best to require too much of it. The teacher should devote just as much time as is possible to the oral expression, hence the oral reproduction and dramatization of stories should be encouraged. All lines of work given in argriculture, Nature Study, literature should be discussed frequently and extensively.

b. The memory gems here should become just a little bit more closely related with the child's developing thought and vocabulary and more of them required. It is a splendid plan here to allow the child to select his own memory gems, for part of the time at least.

c. Imagination: Children tell or write imaginary stories. A most valuable exercise for cultivating the imagination consists in using an easy story such as "Three Little Cotton Tails," (or another that the children are not familiar with) in the following manner: Teacher begin reading the story; read to a keenly interesting place; stop reading and say, "Now, boys and girls" you may tell me what you think Mother Cotton Tail did," or "What do you think Snubby Nose was going to do?" Then let the boys and girls write the rest of the story. This may be used repeatedly without tiring the children.

d. Pupils in this grade should have considerable dictation exercises given, short sentences using words with contractions, and frequent use of quotation marks so that they may become accurate in the application of these and in the proper punctuation. In the formal drill, all the punctuation marks should be reviewed and emphasized. Use of dictionary introduced.

e. All the new words of the lessons from day to day should be selected and pupils required to write original sentences containing these words.

f. Many short compositions or story-reproductions should be required during the term. These should deal with most familiar objects.

g. Letter writing: Children should be encouraged to write letters to each other, to the teacher, to the parent, and very careful attention should be given to neatness and form and accuracy of all this work. Many poems from the classics should be studied in this grade, some in connection with Nature Study, as "Telling the Bees," "The Barefoot Boy," etc.; some with agriculture, as Whittier's, "The Corn Song," "The Huskers" and others. In this grade also may be given a delightful study of Whittier's classic—"Snow Bound."

The following poems should be read during the year and three or four choice ones memorized.

"The Village Blacksmith."
"Robert of Lincoln."
"Liberty Bell."
"Barefoot Boy."
"The Pied Piper of Hamelin."
"The Leak in the Dike."
"The Old, Old, Old, Old Lady."
"The Flag."
"The Arrow and the Song."
"The Brown Thrush."
"Out to Old Aunt Mary's" and
"Little Brown Hands."

Suggested Books to Be Added to the List Already Given.

Some of the harder stories that may be received forw this third grade work are:

"Famous Men of Greece."
"Heidi."
"Lisbeth Longfrock."
"Patsy."
"White Patch," Angelo Patri.
"Ten Boys," Jane Andrews.
"Ways of Wood Folk."
"Friends and Helpers."
"Book of Birds."
"Our Birds and Their Nestlings."
"Outdoor Secrets."
"Diddie Dumps and Tot."
"Story Tell Lib."
Otis' books, "Ruth of Boston," etc., etc.
McGovern's "Nature Study and Literature."

FOURTH GRADE.

Not many new plans are to be introduced in the fourth grade but the work as outlined for the first three grades should be reviewed thoroughly and extended over new points which the children of the fourth grade are well able to understand.

a. Punctuation. Children in this grade should be able to meet and understand almost all forms of punctuation and this work should be reviewed with them so frequently that they will not think of writing a sentence without using the proper punctuation, and for this purpose a great deal of dictation work may be given. Stanzas of poems in which they are required to capitalize and indent and punctuate should often be given.

b. Letter writing should be continued and practised and much care given to margin, to punctuation, paragraphing, etc. Up-to-date letter forms should be part of the practice work of this grade.

c. Memory work here should be continued and some of the classics should be the basis of the study of work in literature and quotations from these largely used throughout the grade. Children in this grade are particularly fond of poems, such as Whittier's "Telling the Bees", "Corn Song", "The Huskers", "Horatius at the Bridge", "Sheridan's Ride", 'The Ride of Paul Revere", "Barbara Frietche", and "Snow Bound". These are so beautiful and helpful in the cultivation of good English and they should find place in this grade.

d. Formal work. As to this, any good elementary book in language may be used as a guide. Children should know all the different forms of verbs, nouns, pronouns, etc., that appear in their readers. They should be taught the parts of speech, the noun, pronoun, adjective, verb, etc. They should also be taught to use rightly the singular and plural verbs and the use of the personal pronoun. Much attention should be given here to the correction of wrongly used pronouns. "Between you and I" is one of the common expressions of the day and children in the Fourth grade should be so thoroughly drilled in the correct use of these words that it will become second nature to them. Another error quite as gross as the one mentioned is the expression so commonly used, "He don't", "She don't". Elsewhere has been mentioned the need of showing children the use of the apostrophe in contractions. In order to avoid such errors as this, it is necessary for them to know just what words have been contracted. "Don't" is the contraction for "do not" and if we but show the children the correct words to use with "do not", much time will be gained for them, and much bungling of English be eliminated.

e. In this grade the common errors of the school-ground should be corrected, e. g., "aint", "done" for "did", "have did" for "have done" "seen for saw", etc., etc.

f. Abbreviation taught as necessary.

g. Written reproduction of stories, also short compositions on familiar subjects.

h. Oral reproductions and dramatization of stories. The question of encouraging oral expression must not be dwarfed in this grade by requiring too much written work. Quite a little attention must be ot course given to form, but we must needs look to the thought of helping the children to express themselves freely on any subject with which they are familiar. Thus, a good exercise for the day would be to mention some topics of local or national interest and through the medium of conversation urge the children to give their thoughts concerning the subject mentioned.

LANGUAGE AND GRAMMAR.

FIFTH, SIXTH, SEVENTH AND EIGHTH YEARS,

By J. L. Clifton, *Columbus, O.*

The most important factor in the growth of language power is imitation. The environment of the child has a great influence in the choice of the language used by the child; therefore it is necessary for the children to hear the best possible language in the school room. All language teachers agree that the fifth and sixth grade work should be confined to the multiplication of ideas, free thought and power of expression, oral and written. Formal grammar should be studied in the seventh and eighth grades, but useless old distinctions and classifications should be given but slight attention. The end in view in the study of English is, by the use of good models, to stimulate a natural choice of correct words, and to understand the fundamental principles that are necessary in all composition. In the first four years of the "Suggestive Outline for Language Work" are found repeated suggestions concerning the necessity of developing language power by the child's practice in the use of oral expression. This should be continued in the fifth and sixth years work. Encourage the children to relate their experiences in seeing, hearing, doing and thinking, and do not consider the recitation a failure because the children have done almost all the talking. The teacher is a great factor in the results obtained. When the teacher speaks correctly and habitually uses good language, the children gain a great advantage by imitation. Most language books have pictures, that appeal to the life and experiences of the child. The teacher must be the guiding hand and the results of the picture lesson depend on the ability of the teacher. As the work progresses, more written work is expected and required, but the oral expression must not be slighted. During the fifth and sixth years the study of troublesome words and idioms should be encouraged. Model words and sentences should be chosen and repeated until the children are able to use correctly in sentences such words as, "shall", "will", "lie", "lay", "he", "him", "I", "is", "are", etc. Guessing must not be tolerated or all good results will be lost. The ability to correct mistakes in composition is the final test of the child's knowledge of the subject. Letter writing is encouraged in all language books and while correct natural expression is the most essential, a knowledge of the mechanical elements is necessary. These elements, such as punctuation, capitalization and abbreviations, are not most readily learned by rules and special illustrations, but practice, under the careful guidance of the teacher is necessary.

FIFTH YEAR.

Plan: 1st. Observation lessons.
2nd. Picture studies (Offer additional pictures from the ones in the language books).
3rd. Study stories and poems.
4th. Study Invitations, Notes and Letters.

Remember: "Language and Literature must be correlated for best results."

The mechanical study may be classified:

1st. Capitalization, Punctuation and Abbreviation.

2nd. The Sentence — its simple elements; modifiers; classification of sentences.

3rd. Parts of speech; illustrate in sentences.

Observation lessons:

Choose subjects for oral and written recitations, such as "The Cat", "The Dog", "My Father's House", "The Cow". Note for oral exercises: the name words or nouns; the sentences that relate facts; the sentences that ask questions. (The teacher should direct the recitation in such a way that only one child talk at a time, and that all are listening; also attempt to have several anxious to relate their stories.)

Trees, fruit, berries, houses, woods, fields, hills, streams and squirrels or other subjects that are appropriate for oral and written lessons. (The children should be constantly impressed with the fact that they are expected and required to express themselves in sentences. In oral recitations discourage the constant use of "and.")

Nature poems may be written from dictation or copied.

"Down in a green and shady bed
A modest violet grew;
Its stalk was bent, it hung its head,
As if to hide from view."

Picture studies:

At least six pictures should be studied. The class should not be given more than one picture study for a recitation. Require the children to have a foundation in the picture for each statement they make concerning it. Encourage the development of the story expressed in the picture. Usually the child is able to apply the picture to his own experience.

Teach in connection with picture studies, the proper way to indicate abbreviations, and the correct use of capitals.

These studies should be continued at intervals through-out the fifth year.

Stories and Poems:

"Great, wide, beautiful, wonderful world,
With the wonderful water round you curled,
And the wonderful grass upon your breast,
World, you are beautifully drest.

The wonderful air is over me,
And the wonderful wind is shaking the tree,—
It walks on the waters, and whirls the mills,
And talks to itself on the tops of the hills.

You friendly earth, how far do you go
With the wheat-fields that nod and the rivers that flow,
With cities, and gardens, and cliffs, and isles,
And people upon you for thousands of miles?

Ah, you are so great, and I am so small,
I tremble to think of you, World, at all;
And yet, when I said my prayers, today,
A whisper inside me seemed to say,
"You are more than the earth, though you are such a dot;
You can love and think and the earth cannot."

This poem is a model for study.

The teacher should require the class to answer questions suggested by the poem. The following poems may also be studied the same way:

"The Sword of Bunker Hill", by William R. Wallace.
"A Life Lesson", by James W. Riley.
"The Arrow and the Song", by Henry W. Longfellow.
"The Cloud", by Percy B. Shelley.
"Jack Frost", by Hannah F. Gould.

As these poems are studied, simple sentences and easy parts of speech may be noted.

Notice the use of punctuation marks and require the children to recognize each mark and know its functions.

INVITATIONS, NOTES AND LETTERS.

Follow the outline for letter-writing given in your text-book. Short invitations may be written by the teacher for models. Imitation in writing notes and letters is necessary in order that the children acquire the correct ideas and forms at once. Skill and accuracy are easily developed under the careful guidance of the skillful teacher.

NOTE: The teacher should study the outline for the fifth year and apply these suggestions in the order given by the text in use. The intention of these suggestions is simply to point out the fundamentals to be taught during this year.

SIXTH YEAR.

The plan outlined in the fifth year should be followed. Each topic should be given thorough consideration. Observation lessons must be more intense and practical, bringing out the best expression from the teacher and pupils. The tendency is to have too many written lessons. The children enjoy oral expression and while such work is more taxing on the teacher, for best results this oral work must be continued. The teacher must not harangue the children by superflous criticisms but by example, teach correct English. During the entire period of the "Observation Lessons" the teacher should keep in mind the mechanical study. The time spent in each lesson on capitalization, punctuation, parts of speech, etc., must be brief. Never allow this period to drag and keep alive the spirit of the class.

Additional topics for oral and written composition are: "Saturday," "Sunday," "The Base Ball Game," "Fourth of July," and other kindred subjects suitable to the community. Allow the children free expression and do not tolerate a dry, prosaic, style, as such work is unnatural and destructive.

Frequent picture studies should be continued throughout the year, conversation lessons are valuable both to the teacher and pupil. In the study of pictures the teacher must be active as the child has the perception and imagination. The skillful teacher will develop these talents in the child as they are fundamentals in the language work.

Poems and stories suggested in the first four years work may be studied and many memorized.

The only way to successfully teach a memory exercise is for the teacher to commit the poem, and by quoting it, stimulate a desire in the children to know the poem. The poems suggested in the fifth year's work are good samples, but the work must not be limited to these few selections.

Letter writing and business forms, notes and invitations, should be continued, as suggested in the fifth year. The teacher must expect the children to know the correct form of all kinds of letters. Develop this knowledge and do not allow this part of your work to become mechanical.

*Note.

As suggested in the fifth year, the outline should be applied in the order the lessons come in your text-book. The elementary teacher in language should base his work on the text-book used. These suggestions point out the principles that must be mastered and the ends in view as the result of fifth and sixth grade work.

SEVENTH AND EIGHTH YEARS.

Before beginning the study of formal Grammar the teacher should review thoroughly, the text-book to be studied. The results of the

year's work should be apparent to the teacher before the work is begun, if the best teaching is done. The most important factor in seventh and eighth grade work in Grammar is correct use of language by the teacher and pupil. Written thoughts are more nearly correct than spoken thoughts; therefore it is necessary for best results to have many of the lessons oral rather than written. The teacher must realize that the book is only a guide and that the teacher is the real life of the recitation. Many Grammars are divided in order that Orthography and Etymology be taken up as separate parts, but by following the outline for the fifth and sixth grades, the pupils are now ready to study the development of their language by applications. Usage is the only authority for the rules of Grammar; then, when you understand the usage, you appreciate the rules. The inductive method of development is necessary for best results, and as before stated, the teacher must be the leader. Men, women, and children are judged by the language they speak. One's speech indicates the degree of his culture and refinement. The development of the power to think is a greater factor than memory work. The end in view is to know the difference between correct and incorrect English and unless you attain this end, you will find Grammar dull and difficult.

The following outline may be applied to any text-book in Grammar. To know what to teach and how to teach it, is necessary, therefore the outline in Grammar precedes the one on composition but in the discussion, and in practice the two subjects (Grammar and Composition) should be treated as one.

Grammar.

A. The Sentence.
   1. Declarative.
   2. Imperative.
   3. Interrogative.
   4. Exclamatory.

B. Subject and Predicate.

C. Parts of Speech.

Nouns, Pronouns, Adjectives, Verbs, Adverbs, Prepositions, Conjunctions and Interjections.

D. Phrases and Clauses.

Composition.

A. The Correct Expression in Written Composition.
B. The Paragraph.
C. The Sentence.
D. Words of the Sentence.
E. Narration and Description.
F. Style.
A. The Sentence.

The classification of the sentence has been taught in previous years (fifth and sixth), therefore it is only necessary to give additional work in this study by using more difficult sentences. Do not get mechanical in this study but keep life and spirit in the work.

Take your model sentences from the works of the best speakers and writers. The class should always note the choice of words in these sentences. Two models are here suggested:

> "I shot an arrow into the air,
> It fell to earth I knew not where:
> For, so swiftly it flew, the sight
> Could not follow it in its flight."
>
> —*Longfellow.*

> "Here on this beach a hundred years ago,
> Three children of three houses, Annie Lee,
> The prettiest little damsel of the port,
> And Phillip Ray, the miller's only son,
> And Enoch Arden, a rough sailor's lad
> Made orphan by a winter's ship-wreck, played."
>
> —*Tennyson.*

B. Subject and Predicate.

Develop the idea of what the subject is, and also the predicate. Do not require your class to commit the set rules, but remember always the application. Have several sentences as models and soon all the pupils of the class are able to distinguish the subjects from the predicate, even in complex sentences.

Parts of Speech.

In the seventh year the fundamental office of each part of speech should be mastered, also its relation to other parts of speech, leaving only a growth in this study for the eighth year. There is no worthy excuse for not knowing the ordinary usage of all words in sentences, at the completion of the seventh year. Then the teacher must increase and encourage the pupils work along the line during the eighth year.

The introduction of long and detailed outlines of the parts of speech has a tendency to confuse rather than help the conception of the parts of speech.

Conjugation of verbs is necessary, but only by development. Mechanical memory work must be avoided. The skillful teacher is able to have parsing exercises that are beneficial to the pupils, but long weary recitations on parsing must not be tolerated. Cramming pupils or teachers with the technicalities and rules of Grammar, that they may be able to pass the pupil's or teacher's examination, means destruction to their growth of language power. They should be better prepared for the examination if they avoid this cramming process, and they would be if the examination were pedagogical. The value and importance of in-

finitives and participles are shown by their constant use by the best speakers and writers. Model sentences should again be used, and in this way the infinitives and participles cease to be "stumbling blocks" to the pupil's progress, but a decided addition to their power of expression. The Orthography of Grammar must be a part of every lesson, and the teacher should constantly keep in mind that correct spelling is as important as correct expression. Capitalization, punctuation and all the other fundamentals of Orthography are acquired best by critical application.

Note, therefore, in your teaching, that the end in view in the study of language and Grammar is, power to express your thoughts in the best possible English and a knowledge of the principles of the English language.

UNITED STATES HISTORY.

By James T. Begg, *Ironton, Ohio.*

INTRODUCTION.

The aim in teaching History in the public schools should not be so much a memorizing of facts and figures but a study of the character of the civilization in which the event occurred and of the people that caused it to occur. Observe the causes that led up to this particular event and the results that followed it. Compare the event studied and its surrounding conditions and people, with like conditions in the present; then make deductions, draw conclusions, discover morals, observe mistakes, emphasize examples of bravery and patriotism, and, by so doing, lay the proper foundations for good citizenship, for, if we fail to develop good citizens, a strong citizenship and to infuse the coming generation with a spirit of patriotism, our efforts in the teaching of U. S. History will avail nothing. We must have our pupils see that the aim of the people of today has materially changed from what it was when the Puritan fathers landed in 1620. Then they had to combat nature in all her weird forms and only by resorting to physical strength and warfare could this be accomplished. Hence the Indian Wars, the struggle with foreign countries and our own Civil War when the U. S. Government was trying to free itself of those bonds of slavery that had been so tho'tlessly placed there in Colonial times and had been allowed to strengthen until they were strong enough to menace the life of the Nation. But now it is vastly different, man has virtually conquered nature in all her forms; he has made the fertile valleys bear rich harvest; the barren deserts give forth their portion, cleared the trackless forests, drained the swamps, discovered the rich secrets of the hills and mountains, has penetrated the most remote places with his vast railroad systems, has taken electricity from the air and made it do work, and has even made the

old saying "A Bee Line" an actual condition in Aerial navigation. In short he has multiplied thousands of times the complexity of society in the relation of man to his fellowman so that no longer are we to consider wars of conquest and extension but rather we are confronted with the mighty problems of government in all its phases, with the relations between capital and labor, the control of corporate wealth, the care of the Nation's unfortunate, how to feed and provide for our rapidly increasing population, etc., etc., ad infinitum.

To do all this is the stupendous task of tne public school teacher and to lay the proper foundation for this it appeals to us, that there is but one way and that is to begin when the child first enters school to read and tell to him the best stories of the accomplishments of the makers of history; to teach poems that inculcate lessons of patriotism and true citizenship; teach him to read only the best that is written in history. With that aim in view the following outline with suggestive references is given in such a way we hope, that not only the city and village school may find something of value but also the rural school may find it of service in selecting material.

Directions to teachers. Whenever any event is being studied such as Washington and his campaigns in the Revolution, have the children make a map of the country and show the part affected. Geography both physical and political should be carried along with the history. Many references have been given that will not be accessible to all schools but some of them can be had in every school. Start your history library by purchasing a few books other than the regular school text book. Some of the best ever written on the various subjects have been given. In teaching the history stories in the first two classes advantage may be taken of the story period in the morning, the reading lesson, the language lesson, or the Geography. Have the pupils reproduce the story both orally and in writing. Fasten a few of the fundamental facts of each event. Details of battles have been eliminated and more biography, social, economic and political history put in. The work has been so divided that by closely following the outline it will be an easy task to accomplish the work as outlined, in nine months and in all schools having only the eight months term, time can be gained by giving less attention to some of the topics. When time is short, details may be omitted and one cut off of the review. Each teacher should look up every event and the accessible references so that in assigning the work for the next day she may give the children the references by title, vol., number and page. This will greatly assist the pupil, also conserve his time.

In the first class it may not be advisable to use all the stories referred to but many just as applicable may be substituted. Those given are only to serve as a guide. The teacher should have her story carefully worked out before giving it to the pupils.

The school can well be divided into three classes or grades, viz. the primary, consisting of the first three grades; the intermediate consisting of the fourth and fifth grades, and the grammar or book grades containing the sixth, seventh, and eighth grades.

The history taught to the first and second classes must necessarily be by story and selected by the teacher, while in the third class use can be made of the book and library. Some attention can also be given to the library work in the middle class.

It is impossible in this outline to include everything that might be of importance in the history of U. S. but enough has been suggested to give the student a good understanding of the history of the country and its relation to world history.

In the first two classes Stories of Indian life to teach (a) manner of living, (b) habits and customs, (c) occupation, (d) location, (e) explain relation of conditions at formative period of our country to the present times, (f) show advancement in civilization, etc.

References:—Wigwam stories by Judd, Story of Hiawatha, lines 64-235, Lovewell's Fight anonymous, Fox's Indian Primer. Pocahontas by Eggleston, Tecumseh—Eggleston, Conspiracy of Pontiac—Parkman, Stories of our Country—Johnnot.

In Ohio much interesting history can be linked around the stories of the mound-builders. Whenever possible localize the story.

Celebrations:—These should be observed by appropriate exercises in the school so far as possible by recitations, stories, (both original and copied) suitable songs, in order to teach the patriotism of country and humanity, to introduce the nation's history, to arouse the interest of the pupils and to vary the regular routine of school work.

Lincoln's and Washington's Birthdays; References—Like Washington, Beth Howard, The Flag Salute, Hurrah for the Flag, Your Flag and My Flag, Being Like Washington—Gould, Stories of Washington and Lincoln's Boyhood, President, Revolutionary War, and Civil War Stories, Lincoln and Young Birds, Lincoln Carries a Little Girl's Trunk to the Station, Rescue of a Pig, How Lincoln Paid for Life of Washington.

Sayings and Maxims of Lincoln.

Broken eggs cannot be mended.

All that I am or hope to be, I owe to my angel mother.

God must have liked the Common People or he would not have made so many of them.

How Betsy Ross Made the Flag.

Poems:—There are many Flags in many Lands, America, Columbus, Battle Hymn of the Republic, Song of Marion's Men, Bunker

Hill, Taylor's Star Spangled Banner, The True Patriotism, Never Give Up, The Flag Goes By—Bennett, We Thank Thee—Margaret Sangster.

Appomattox Day References:—With Lee in Virginia, The Young American, Anti-Slavery Poems—Whittier, Little Shepard of Kingdom Come—Fox, Poems of American Patriotism—Matthews, American War Ballads—Eggleston, In War Times—Holmes, Two Little Confederates—Page, Hospital Sketches—L. M. Alcott, etc.

Memorial Day and Fourth of July References:—What constitutes a State?—Jones, The Bivouac of the Dead—O'Hara, Warren's Address to American Soldiers at Bunker Hill—Pierpont, The True Patriotism, Stories of Great Americans for Little Americans, Story of the Thirteen Colonies, Story of the Great Republic, Stevens of Philadelphia—Otis, The Story of our English Grandfathers, Declaration of Independence, Liberty Bell, God is Great and Good, Paul Revere's Ride, Gettysburg Speech—Lincoln, The Perfect Tribute, Grandfather's Chair—Hawthorne, Green Mountain Boys—Thompson, Ode for the Fourth of July—Lowell, The Crisis—Churchill, also many that have been suggested in the other celebrations can be used.

Columbus Day:—Purpose (a) Show difficulties of undertaking, (b) Explain degree of civilization, (c) Show limited amount of scientific knowledge at that time, (d) Introduce the American Indian, (e) Lay the foundation for the study of Colonial History.

References: — America, Columbus — Tennyson. Stories of Columbus, H. G. Reiter; Hurrah for the Flag—Nesbit; Beginners of a Nation—Eggleston; Voyage to Vinland—Ballantyne; Westward with Columbus—Gordon Stables; Young Folks Book of American Explorers—Higginson; Life of Columbus—Seelye; Columbus' Letter to St. Angel—American History Leaflet No. 1, Fisk's Discovery of America and Adam's Christopher Columbus.

Thanksgiving Day:—(a) Why observed, (b) The First Thanksgiving Day, (c) Pilgrims in England, (d) Life in Holland, (e) Crossing the Ocean, (f) Arrival at Plymouth, (g) Building Homes, (h) Making Friends with the Indians, (i) Method of Securing a Living, (j) Kind of Government.

References:—The Story of the First Thanksgiving—Kate Wiggins; Christmas, The Birth of Christ—Bible; The Christ Child—Andrea Hofer; Story of our English Grandfathers, Little Stories of England; Landing of the Pilgrims' Fathers in New England—Mrs Hemans; Standish of Standish—Austin; Why the Pilgrims Left Holland—Hart; The Compact—Hart; Life in Plymouth—Bradford; The Colonies—Thwaites.

Christmas:—(a) Study of the Story of the Birth of Christ, (b) The Life of Joseph and Mary, the Story of the Hebrew Nation, The Life of Abraham and Isaac, Jacob and Esau, Saul and David.

References:—The Bible, Guerber's Story of the Chosen People, Tales and Customs of the Ancient Hebrews—Herbert. The Life of Jesus of Nazareth.

At other times in the year than at the celebrations teachers of the second class may profitably use the following stories:

Hawthorne's Wonder Book; American Life and Adventure—Eggleston; Myths of Greece and Rome—Guerber; Greek Heroes—Kingsley; Mythology—Bulfinch; Stories from Homer—Church; Greek Myths—Hawthorne; Stories from English History for Young Americans—Harper Brothers; Classic Myths—Gayley.

Story of the Colonies and Colonial Life.

(a) John Smith.
(b) Pocohontas.
(c) Roger Williams.
(d) William Penn.
(e) John Endicott.
(f) John Carver.
(g) Miles Standish.
(h) Governor Berkley.
(i) Bacon's Rebellion.
(j) Slavery in Va.
(k) Cotton and Tobacco in the Colonies.
(l) Peter Stuyvesant.
(m) Lord Calvert.
(n) Clayborne.
(o) The Grand Model
(p) The Great Law.
(q) Story of Oglethorpe.
(r) Story of Evangeline.
(s) Story of Benjamin Franklin.
(t) Story of King Philip.
(u) Story of the Charter Oak.
(v) Story of Home Life.
(w) Story of Religious Life.
(x) Story of School Life.

Explorations and Discovery.

Christopher Columbus—His home, his education, his difficulties in securing help, the voyage, his discovery. Story of Balboa, Desoto, Ponce.

Graph showing time to be spent on each subject. 6th Grade.

One inch represents one week.

European History
Columbus
Explorers and Discoverers
Colonial History
Colonial Wars
Great Men of Revolutionary Period
Social Conditions of Colonies
Causes of Revolutionary War
Results of Revolutionary War and Constitutional Convention
Daniel Boone
George Rogers Clarke
Stories of Washington
Stories of
- Putnam
- Whitney
- Morse
- Jefferson
- Fulton

Stories of
- W. H. Harrison
- A. Jackson
- Sam Houston
- Robert Gray
- Captain Sutter

Abraham Lincoln and Civil War
Condition of Country following Civil War
William McKinley and War with Spain
Development of Country
History of Ohio
Civics
Review

EUROPEAN BASIS OF AMERICAN HISTORY.—6TH GRADE.

As a proper background to American History the student should know about the following: (a) Story of the Crusades, to show the beginning of commerce between Europe and Asia, (b) Story of Richard I of England, (c) Story of Norse Sagas, (d) Stories of Turkish Invasion, Marco Polo, Sir John Mandeville, Ferdinand and Isabella, Tascanelli, John Gutenberg, Printing, James I of England and Colonization, William and Mary, Charles I and Civil War, Oliver Cromwell and Civil War, George III and American Revolution.

References—For Teachers.

West—Modern History.
Harding—Mediaeval and Modern History.
Atkinson—European Basis of American History.
Cheney—History of England.
Andrews—History of England.
Larned—History of England.
Robinson—History of Western Europe.

Christopher Columbus.

(a) Birth and boyhood; Becomes a sailor; Has a sea-fight; Goes to Lisbon.

(b) His plan for reaching the Indies. Trys to get help to carry out this plan; Gets help.

(c) Sails; First voyage; What happens on the voyage; Discovers land; His return to Spain.

(d) Other Voyages; Discovers continent.

(e) Old age; Death and burial; Result of discovery.

(f) Claims that Spain based on his discoveries.

References:—Montgomery's Primary History; Eggleston's "History for Beginners"; Abbott's "Life of Columbus"; Gordy's Elementary History; Our Country's Story—Tappan; Elementary History—Thomas; The World's Discoverers—Johnson; Discovery of America,—Fisk Vol. I Poem—Columbus—Joaquin Miller; Famous Voyagers—Bolton.

Explorers and Discoverers.

(A) English.

(a) The Cabots-Discover the continent; voyages not followed up but later made the basis of English claim to a part of North America.

(b) Sir Walter Raleigh—Sends ships to America; Two American plants sent to Europe; Makes a settlement; Returns to England; Loses Colony.

(c) Sir Francis Drake—Early life; Description of fleet; Passage of straits; Cape Horn rounded, loss of vessels, exploring west coast of America; completion of his voyage around the globe; infleunce of his voyage.

(B) Spanish.

(a) Ponce De Leon—Magic fountain; Discovers Florida.

(b) Balboa—Discovers Pacific Ocean; Proved that America was not a part of Asia.

(c) De Soto—Discovers Mississippi River; His death and burial.

(d) Magellan—Greatest voyage up to this time; Gave positive proof that the earth is round; Changed the geographical ideas of the time.

(e) Vasco De Gama compared with Columbus.

(f) Cortez—Explorations and conquests in Mexico.

(g) Coronado and Cabrillo—Explorers.

(C) French.

(a) Champlain—Discovers Lake Champlain; Established the claim of France on the banks of the St. Lawrence.

(b) Father Marquette and La Salle—Explore the Upper and Lower Mississippi, and established the claim of France to the Louisiana Territory.

(D) Dutch.

(a) Henry Hudson—Discovers Hudson Bay and Hudson River; Gives the Netherlands a claim in North America.

(E) Portuguese.

(a) Americus Vespucius—Explores coast of South America for Portugal. Names the country.

References:—McMaster's History, Montgomery's Primary History, Eggleston's History for Beginners, Famous Voyagers—Bolton; Discovery of America—Fisk; The World's Discoverers—Johnson; The Story of Magellan—Butterworth; The Conquest of Mexico—Prescott; Pioneer Spaniards in South America—Johnson; The Struggle for a Continent—Parkman.

Colonial History.

(A) New England Colonies.

(a) Massachussetts—Plymouth; Captain Miles Standish; Pilgrims; King Philip's War; Salem Witchcraft.

(b) Rhode Island—Roger Williams; Providence; First settlement to open its doors to everyone.

(c) Connecticut—Thomas Hooker; Windsor; Pequod War; First written constitution.

(d) New Hampshire—Mason and Gorges; Portsmouth.

(B) Middle Colonies.

(a) New York—New Amsterdam; Dutch Governors; Taken by England; Name Changed; Fur Trade.

(b) Maryland—Lord Baltimore; St. Mary's; Home for Catholics; Religious Liberty for all Christians; Baltimore Founded.

(c) New Jersey—Elizabethtown; Lord Berkley and Sir George Carteret.

(d) Pennsylvania—William Penn; Quakers; Philadelphia Founded; Treaty with the Indians.

(e) Delaware—Wilmington; Swedes.

(f) Virginia—Jamestown; Captain John Smith; Cold-water Cure; Starving Time; Bacon's Rebellion; Introduction of Slavery; House of Burgesses.

(C) Southern Colonies.

(a) North Carolina—Albemarle; Grand Model; John Locke; Population mostly indented servants.

(b) South Carolina—Introduction of rice and indigo; Charleston founded; No bond servants.

(c) Georgia—James Oglethorpe; A home for debtors; No slaves; Manufacture of silk attempted; Savannah.

References:—Montgomery's Primary History, Fiske's "Old Virginia and her Neighbors", Courtship of Miles Standish by Longfellow, Landing of the Pilgrims by Hemans, Richard of Jamestown—Otis; Calvert of Maryland—Otis; Ruth of Boston—Otis; Stephen of Philadelphia—Otis; William Penn—Hodges; The Struggle for a Continent; Parkman; Elementary History—Gordy; Our Country's Story—Tappan; Elementary History of the United States—Thomas; French Pathfinders in America—Johnson; Stories of the Thirteen Colonies—Guerber, Betty Alden—Austin; Standish of Standish—Austin; Colonial Days in Old New York—Earle.

Colonial Wars.

(a) Causes, (b) Treaties, (c) Results, (d) Time, (e) Parties at War, (f) Part played by Indians.

1. King William's War.
2. Queen Anne's War.
3. King George's War.
4. *French and Indian War.* (a) Conflict between England and France for Territory in America. (b) Fort DuQuesne—Braddock and Washington. (c) The Albany Congress. (f) Niagara. (g) Quebec. (h) Why each of these places were important. (i) Wolf and Montcalm.

Results:—French lost hold on America; (b) England gets Florida; (c) Americans learn the art of Independent warfare; (d) Had a tendency

to unite the colonists; (e) Made possible the Revolutionary war; (f) Confined the Indians to smaller areas of territory.

References:—Grandfather's Chair--Hawthorne; Struggle for a Continent—Parkman; The Virginians—Thackary; McMaster's Montgomery's, Gordy's, and Thomas' Primary Histories of the United States; Evangeline—Longfellow; The Conquest of the Old North West—Baldwin; Conspiracy of Pontiac—Parkman.

Great Men of Revolution.

(a) George Washington—Home life, Anecdotes of, Education, deeds of heroism, Commander in Chief of army, President of Constitutional Convention, First President of the United States.

(b) Benjamin Franklin—Home Life, Anecdotes of, Education, deeds of heroism, Member of Committee to draft Declaration of Independence, Secures aid from France, Bottles Electricity, As a printer.

(c) George Rogers Clarke—Home life, Anecdotes of, Education, deeds of heroism, Capture's Forts Kaskaskia and Vinceenes, Gains country west of Alleghany mountains for United States.

(d) Patrick Henry—Home life, Anecdotes of, Education, deeds of heroism, Member of Legislature from Virginia, Makes speech opposing taxation of colonies.

(e) James Otis—Home life, Anecdotes of, Education, Deeds of heroism, Opposes writs of Assistance, Sounds trumpet of Revolution, Leader of Patriots.

(f) Samuel Adams—Home life, Anecdotes of, Education, deeds of heroism, Opposes Stamp Act, Arouses people by patriotic speeches; Signs Declaration of Independence.

(g) John Hancock—Home life, Anecdotes of, Education, deeds of heroism, President of Continental Congress, Signs Declaration of Independence, Stirs the people by speeches, Great Leader.

(h) Robert Morris—Home life, Anecdotes of, Education, deeds of heroism, Patriot Financier, Signer of Declaration of Independence and Constitution, Founded bank of North America.

(i) John Adams—Home life, Anecdotes of, Education, deeds of heroism, Defended soldiers connected with Boston Massacre, Member of First and Second Continental Congresses, Member of committee to draft Declaration of Independence, Minister to France and Holland, Signer of Treaty of Peace with Great Britain.

(j) John Paul Jones—Home life, Anecdotes of, Education, deeds of Heroism, Assisted in founding our navy, Bonhomme Richard, Capture of Serapis.

(k) Thomas Jefferson—Home life, Anecdotes of, Education, deeds of heroism, Drafts Declaration of Independence, etc.

References: Washington—Scudder, The Men who made the Nation—Sparks, Benjamin Franklin—Moore, Thomas Jefferson—Merwin, Paul Jones—Hopgood, Historical Americans—Brooks, The American Revolution—Fiske, How George Rogers Clarke Won the North West—Thwaites, See References to Colonial History, and Explorers and Discoverers, Washington—Abbott, Franklin—Abbott.

Social Conditions.

(A) New England Colonies.

(a) Characterized by thrift, piety, and love of liberty; Town meetings; The clergy led all public affairs. Witchcraft.
(b) Some manufacturing; Fisheries profitable.
(c) Natural advantages to these industries.
(d) Present condition of these same industries.
(e) Start of the cities. Story of Indian experiences.
(f) Common school in each town; Puritan simplicity of dress, manner and morals.
(g) Very little literature; Religious writers, Cotton and Increase Mather; John Cotton; Roger Williams.

(B) Middle Colonies.

(a) Mixed population—Dutch; Quakers; Clergy less prominent.
(b) People engaged in agriculture or trade.
(c) Natural advantages to these industries.
(d) Present condition of these same industries.
(e) Start of the cities, Story of Indian experiences.
(f) Social life less sober—dances, husking bees, races. Quaker influence as strong as Puritan against Sabbath breaking.
(g) Educational advantages fair even in large towns. Mixed system of town meeting and Parish committee.

(C) Southern Colonies.

(a) Planters, men of good birth and excellent manners; aristocratic.
(b) Independent planters.
(c) People engaged in agriculture and commerce.
(d) Natural advantages to these industries.
(e) Present condition of these same industries.
(f) Start of the cities. Indian experiences.
(g) No towns; few schools; Clergy illiterate; Parish Committee managed local affairs.

References: See Colonial History, Great Men, and Industrial Evolution of the United States—Wright.

Causes of Revolutionary War.

(A) Remote Causes.

(a) Settlers treated as inferior class of people.
(b) Colonies to be kept independent.
(c) Laws framed to favor manufacturer and merchant of England at expense of colonists.
(d) American farmer compelled to send his products to England and to buy his goods in England.
(e) Iron works denounced as nuisance.
(f) Effect of French and Indian War.

(B) Direct Causes.

(a) Passage of Stamp Act.
(b) Mutiny Act.
(c) Boston Massacre.
(d) Boston Tea Party.

Results of Revolutionary War.

(A) Independence of United States acknowledged; Treaty of Paris; Benjamin Franklin; John Adams; Thomas Jefferson; Henry Laurens to negotiate treaty.

(B) Articles of Confederation inadequate; Lack of Power (1) for enforcing law; (2) for raising money; (3) for regulation of commerce.

(C) Constitutional Convention in Philadelphia; Washington presiding officer; Madison and Hamilton leaders; Constitution adopted; Federalists; Anti-Federalists.

References: Montgomery's, McMaster's, Gordy's, Thomas' and Barnes', Primary Histories, History of the United States—Scudder, The American Revolution—Fiske, The French War and the Revolution —Sloan, Essentials in American History—Hart, Conquest of the Old Northwest—Baldwin.

Daniel Boone:

(a) Boone's life in North Carolina.
(b) Boone's wanderings in Tennessee. His bear tree.
(c) Goes to Kentucky; Indian tricks; Makes the "Wilderness Road" and builds a fort at Boonesboro.
(d) Daughter stolen by Indians; How he found her; Boone captured by the Indians; They adopt him as a son; Escapes but is found; What tobacco dust did.
(e) Boone's old age; He moves to Missouri; Begs for a piece of land. His grave.

References: Montgomery's Primary History, Elementary History of United States—Gordy, Daniel Boone—Abbott.

Purpose of Stories: To show great achievement and sacrifice of man, to show growth of country, to show inventions, explain Patriotism to the young child, arouse an interest in historical characters.

George Rogers Clarke—Kentucky life, Indian Ravages, Trip to Virginia, His visit with Patrick Henry, His trip to Pittsburg, His trip down the Ohio to the Falls, Training his men, His march to Kaskaskia, Capture of Kaskaskia, Treating with the Indians, Strategy at Vincennes, March from Kaskaskia to Vincennes.

Stories of Washington—His boyhood, his mother, as a surveyor, as a general, as a President, at Valley Forge, Assuming command of the Army, Crossing the Delaware; Sent to the French Fort.

Stories of Putnam, Morse, Fulton, Jefferson, Wm. H. Harrison, Sam Houston, Robert Gray, Captain Sutter.

References: Our Country's Story—Tappan, The Beginner's American History—Montgomery, McMaster's Elementary History, Pioneers of the Mississippi Valley—McMurray, Elementary History of United States—Gordy, Famous Men of Modern Times—Haaren and Poland, Washington and His Country—Fiske—Irving, The Crossing—Churchill.

Abraham Lincoln and the Civil War.

(a) Early life—Family moves to Indiana; Death of his mother; Her influence; School life; Books read.

(b) A young man—What he was at nineteen; His strength; Makes a trip to New Orleans; Moves to Illinois; Faithfulness in little things; Honest Abe.

(c) A soldier—Black Hawk War; What Lincoln did.

(d) A lawyer—Becomes a postmaster and surveyor; How he studied law; What the people thought of him as a lawyer; Armstrong murder trial.

(e) A statesman—Elected to Congress; Convention in Illinois; Two fence-rails; The Chicago meeting; Elected President.

(f) As President—

(a) Civil War.

(1) Cause—Southern States secede; Set up Independent government; Jefferson Davis President; North and South like two different countries; Labor in North done by white men, while in South by slaves, South favored slavery, North opposed.

(2) Result—Slaves freed; North victorious; Union stronger; No slavery to dispute over.

(b) Death of Lincoln; Ford's Theatre; John Wilkes Booth; Effect on the Country.

References: See following subject.

Condition of Country following Civil War.

(A) In the South—Great distress; Country laid waste; Luxuries given up, necessaries of life scarce; Prices high; Confederate money depreciated; Commerce and trade ruined; destruction of railroads, farms, plantations, crops and private property not fully estimated, but great; Loss of life; Great debt; Slaves free without provision for them; Reconstruction.

(B) In the North—People suffered little if any hardships; Great loss of life; War debt in every state, county, and town.

References: McMaster's History, A Fool's Errand by A. W. Tourgee, Red Rock by Thomas Nelson, The Perfect Tribute—Page, Elementary History of United States—Gordy, Montgomery, and Thomas. The True Abraham Lincoln—Curtis, Lincoln—Brooks.

William McKinley.

(a) Early life; Educational advantages.
(b) A soldier; Civil War; A private, Lieutenant, Major.
(c) Statesman; Member of seven congresses; Governor of Ohio; President of United States.
(d) President—War with Spain; Rebellion in Cuba; American trade with Cuba interrupted; American money invested in Cuba in danger; American ports used by Cubans in fitting out expeditions which our government was forced to stop; Sympathy for Cubans.
(e) Destruction of Maine; War declared; Battle of Manila; Admiral Dewey.
(f) Blockade of Cevera's fleet; Lieutenant Hobson.
(g) Battle of Santiago; Rough Riders; Colonel Roosevelt.
(h) Peace; Porto Rico; Philippine Islands.
(i) Death of McKinley; Pan American Exposition.

Read article by Lieutenant Hobson in Century Magazine for December 1898 to March 1899.

Development of Industries and Commerce.

Purpose—(a) To show increase in wealth, (b) advantages of the present as compared with the past, (c) relation of the present civilization to the past, (d) establish basis for understanding the present laws and customs.

Inventions.

(1) Cotton gin—Eli Whitney; His father's work-shop; Makes nails; Goes to Georgia; Invents cotton-gin; Increase production of cotton; Effect.

(2) Steamboat—Robert Fulton; Boyhood; The old scow; Goes to England and France; His iron bridges; His diving boat; What he said about America; First steamboat; Trip up the Hudson; First boat in the West; Brought about the settlement of the West.

(3) Steam locomotive—Stephenson; First line in United States; Peter Cooper; Aid to commerce; Railroad systems of United States.

(4) Canals—Erie Canal; Greatest work of kind; How the news was sent to New York when completed; Value to commerce.

(5) Telegraph—Samuel Morse; Alfred Vail; First line; First message; Great aid to commerce.

(6) Telephone—Bell; Improvement over telegraph.

(7) Other inventions; Trolley systems; Electric lights; Electric motors; Gas engines; Steel mills, etc.

(8) Works of engineering; Jetties constructed by Eads in Mississippi; Eads bridge at St. Louis over the Mississippi; Roebling suspension bridges at Cincinnati and New York; Atlantic Cable; Cyrus W. Field; Value of inventions to commerce.

(a) Exports—Cotton, grain, flour, meat. From what section? Value.

(b) Imports—Sugar, coffee, tea, rice; silk; Countries; Ports of Entry; Value.

References: Montgomery's Primary History, McMaster's Primary History, Town and City of Jewett, Thomas' Elementary History, Industrial Studies—Allen, Gordy's Elementary History, Industrial Evolution—Wright, Men of Achievement—Hubert, and Westward Expansion. —Garrison.

History of Ohio: Purpose (a) To show Location, (b) relation to rest of country as to origin, (c) Condition of Country when white men first Settled it, (d) Natural wealth, (e) Growth of Towns and Cities, (f) Advancement in Education, (g) Position maintained among other states, (h) Present opportunities, etc.

The Indians: Location, Part in French and Indian War, Pontiac, Lord Dunmore's War, Logan, Elizabeth Zane.

The Ohio Company: (a) Gen. Tupper, (b) Rufus Putnam, (c) Manasseh Cutler, (d) Winthrop Sargent, (e) John Mills, (f) John Brooks, (g) Thomas Cushing, (h) Crocher Sampson, (i) Jelaliel Woodbridge, (j) John Patterson, (k) Abraham Williams, (l) Purchase of land, (m) Provided for schools, (n) Establishes a college, (o) Why it was called the Buckeye State.

Cities founded:—Cincinnati, Marietta, Columbus, Cleveland.

Great men of:—Sheridan, McClellan, John Sehrman, Wm. T. Sherman, McDowell, Buell, Chas. H. Browne, William Dean Howells.

Presidents from:—Wm. H. Harrison, U. S. Grant, R. B. Hayes, Jas. A. Garfield, Wm. McKinley, and Wm. H. Taft.

State Newspapers:—Cincinnati Commercial, The Enquirer, The Volksblatt, The Times Star, The Ohio State Journal, The Columbus Dispatch, The Cleveland Plain Dealer, The Toledo Blade, The News.

University:—Oxford, Kent Normal, and Bowling Green Normal. (Two latter in process of establishment.)

References:—History of Ohio—Annie Cady, Montgomery's Primary History, McMaster's Primary History, Gordy's Elementary History.

The Making of the Ohio Valley States—Drake, Stories of Ohio—Howles, Ohio History Sketches—Pearson and Harlor.

CIVICS.

Organization of Federal Government.

The President and Cabinet—How elected; when elected; the electors when inaugurated; principal duties.

The Cabinet—The different Cabinet officers; how chosen; for how long; a few duties of each.

Congress—Two Houses, Senate and House of Representatives; how Senators are chosen; for how long; how representatives are chosen; for how long chosen; by districts; in what district you live; where Congress meets; laws for the whole country are made by Congress.

Ohio Government.

1. State government, (a) The principal state officers, (b) how chosen, (c) for how long, (d) duties.
2. County government, (a) The principal county officers, (b) how chosen; (c) for how long, (d) what each officer does.
3. Township. Same as (2) applied to township.
4. City or town. Same as (2) applied to city.

Appendix.

Law—(a) What laws are, (b) difference between federal and state laws, (c) city or town ordinances, (d) what courts are for.

References:

Ashley, American Government, Revised Edition.

Boynton, School Civics.

Andrews, Manual of the Constitution.

Fiske, Civil Government, (good on historical development of civic institutions).

James and Sanford, Government in State and Nation.

Advanced References:

Ashley, The American Federal State.
Hinsdale, American Government.
Hart, Actual Government.
Wilson, The State.

On Ohio:

Siebert, Government of Ohio.

Graph showing time to be given to each subject in 7th Grade History. One inch equals one week of time.

European History .....
Columbus .....
Spanish Explorers .....
English Explorers and Dutch Explorers.....
French Explorers and Discoverers.....
Virginia .....
Maryland .....
Massachusetts .....
Maine, New Hampshire, Rhode Island and Connecticut.....
New York and New Jersey.....
Pennsylvania and Delaware.....
North Carolina, South Carolina and Georgia.....
Colonial Government .....
Colonial Indians .....
French and French posts in Ohio Valley.....
Inter-Colonial Wars—
1. King William's .....
2. Queen Ann's .....
3. King George's .....
4. French and Indian.....
Causes of Revolutionary War.....
Condition of Colonies at this time.....
Prominent men and their part in the war, and Declaration of Independence .....
Results of the war.....
Condition of Country at close.....
Second Continental Congress.....
Articles of Confederation.....
Social and Industrial History of the Colonies at this time..
Review .....

EUROPEAN BASIS OF AMERICAN HISTORY. 7TH GRADE.

(a) Review Sixth Grade European History, (b) Story of Charlemagne, (c) Character of the Feudal System, ZdX Story of the Hundred Years War, dealing only with causes and results, and naming only four or five important battles, (e) The Crusades, (f) Revival of learning, (g) Reformation and religious troubles especially in England, (h) Conquest of the Moors.

References for pupils:—

Yonge's—History of Germany.
Creighton—First History of France.
Guerber—Story of the English.
Church—Stories from English History.
Tappan—World Hero Stories.
McMaster's—Brief History of United States.
Towle—Marco Polo, His Travels and Adventures.
Beazely—Prince Henry, The Navigator.
Atkinson—European Beginnings of American History.

Christopher Columbus—See Sixth Grade.

(a) Early life and preparation, (b) Leaves Italy and settles in Portugal, (c) Routes of trade with the East, (d) Studies Marco Polo's books, maps, charts, globes, etc., (e) His appeal to Portugal, Spain, and England for help to finance his voyage, (f) His misfortunes.

References:—See Sixth Grade.

Explorers and Discoverers—(a) King or Queen under whose authority they sailed, (b) Number of vessels starting, (c) Nature of men and equipment, (d) Purpose of the voyage,—(1) Adventure, (2) Exploration for Crown and Country, (3) Replete financial conditions, (4) Colonization, (e) Incidents of the voyage, (f) Place of landing, (g) Discoveries, (h) Territory explored and incidents of trip, (i) Fate of expedition, (j) Value to country of sending out expedition, (k) Value to civilization in general.

All these things should be known of every man making a voyage during the period of Exploration and Discovery.

Spanish Explorers and Discovers—Vasco de Gama, Cabal, Americus Vespucius, Ponce De Leon, Balboa, Magellan, Menendez, Espejo, Cortez, Coronad, DeNarvaez, Cabrillo, De Soto, and Father Marcos, Estevnico, and Pizarro.

English and Dutch Explorers and Discovers—John Cabot, Sebastian Cabot, Frobisher, Gilbert, Davis, Gosnold, Weymouth, Drake, Raleigh, Hudson, and Hawkins.

French Explorers and Discoverers—Verazzano, Cartier, Coligny, Champlain, De Monts, La Salle, Joilet, Marquette, Allonez, Hennepin, and Roberval.

References:—McMaster's School History, Barnes's, Montgomery's, Eggleston's Forman's, James and Sandford's, Gordy's, Ashley's, and Thomas' United States Histories, Discovery of America—Fiske, The World's Discoverers, Vol. II—Johnson, Pioneer Spaniards in North America—Johnson, Fernando Cortez—McNutt, Conquest of Mexico—Prescott, Spanish Pioneers—Lummis, Henry Hudson—Bacon, English Seamen in the Sixteenth Century—Froude, English Voyages of the Sixteenth Century—Raleigh, Struggle for a Continent—Parkman, Story of Magellan—Butterworth.

Virginia—Origin of Name.

Present Boundaries.
Area and Population.
Principal rivers, cities, and products.
Climate.
Nickname, why so-called.

History.

A. Grant.
   Extent, to whom, date.

B. Settlement.
   1. Cause.
   2. Date.
   3. Location.
   4. Name, why so-called.
   5. Settlers.
      (a) Number, voyage.
      (b) Classify and characterize.
      (c) Occupations.
      (d) Gold excitement.
      (e) Leader.
         1. European life.
         2. Dealings with colonists. With Indians.
         3. Capture by Indians. Release.
         4. Writings.
         5. What did he do for the colony?
         6. What aid did he give to geographers and explorers?
   6. Second Immigration.
      (a) Voyage.
      (b) Settlers—Kind and character.
      (c) Effect upon the colony.

C. Government.

1. Character.
   (a) Number, dates and provisions of each.
2. Council.
   (a) Number of members.
   (b) President.
   (c) Duties.

B. Legislative Assembly.

   (a) Name, why so-called?
   (b) Date
   (c) By whom authorized.
   (d) Number.
   (e) Election or choice.
   (f) Powers.

4. First written constitution in America.
   (a) Date.
   (b) Provision.
5. Citizenship or suffrage.
6. Royal Province.
   (a) Cause.
   (b) Date.
   (c) Change in government.
   (d) Starving time.
      (1) Cause.
      (2) Time.
      (3) Result.
   (e) Pocahontas.
      (1) Regard for settlers.
      (2) Marriage, result, reception in England.
      (3) English name.
   (f) Introduction of slavery.
      (1) When
      (2) Where.
      (3) By whom.
      (4) Number.
      (5) Result.
   (g) Troubles.
   (1) Indian Troubles
   (a) Cause.
   (b) Events
   (c) Length of Peace
   (d) Massacre.
   (e) Result.

2. Domestic Troubles.
   (a) Bacon's Rebellion.
      1. Cause.
      2. Date.
      3. Leader.
      4. Events.
      5. Relics to be seen today.
      6. Punishment of rebels by Berkley.
      7. Charles II's opinion.
   (b) Period of Oppression.
      1. Navigation Acts. Time and Places.
      2. Enforcement of Navigation Acts.
      3. Action of Colonial Assembly.
   (h) Ohio Company Chartered.
      1. When.
      2. By whom.
      3. Composed of whom.
      4. Surveyor.
      5. How much land. When?
   (i) Prosperity and Growth.
      1. Habits of settlers.
      2. Products.
      3. Location of settlement.
      4. Importation of wives—cause, result, price.
      5. Population in 1622.
      6. Founding of William and Mary's College.
      7. Founding of free schools.
      8. Condition at the beginning of the Revolution.

Maryland—Origin of Name.
Present boundaries.
Area and population.
Principal rivers, lakes, and products.
Climate.
Nickname or other items of interest.
History.

A. Grant.
   1. From whom obtained.
   2. Extent.
   3. By whom obtained.
   4. Date.
   5. Name of colony. Why?

B. Settlement.
   1. Cause.
   2. Location.
   3. Name and why so-called.
   4. Date.
   5. Charter—its provisions.
   6. Purchase from Indiana.
   7. Settlers.
      (a) Kind and character.
      (b) Religion.
      (c) Landing.
      (d) Occupation.
      (e) Attitude toward Indians.
      (f) First winter.

C. Government.
   1. Type.
   2. In whom vested.
   3. Right of suffrage—To whom given.
   4. Legislative Assembly.
      (a) Composed of whom.
      (b) Powers.

D. Toleration Act.
   1. Date.
   2. Provisions.
   3. Effect upon the settlement.

E. Mason and Dixon Line.
   1. Location.
   2. By whom surveyed.
   3. When.
   4. How marked.

F. Troubles.
   1. Indian Troubles.
      (a) Susquehannos.
         (1) Cause of War.
         (2) Length.
         (3) Events.
         (4) Results.
   2. Domestic Troubles.
      (a) Clayborne's Rebellion.

(1) Cause.
(2) Date.
(3) Action of Legislature.
(4) Appeal to crown.
(5) Decision.
(6) End of contest.

(b) Religious Strife.
1 Cause.
2. Result.
3. Discovery by Catholics.

(c) Corde's Rule.
1. Cause.
2. Termination.
3. Success.
4. Abolishment of religious tolerance.

G. Growth and Prosperity.
1. Effect of English Civil War in colony.
2. Growth in population.
3. Advent of Quakers under Fox.
4. Condition and government of colony at time of revolution.

Massachusetts—Origin of Name.
Present boundaries.
Area and population.
Principal rivers, cities, products.
Climate.
Nickname, why so called?
History.

A. Original grant.
1. Extent.
2. To whom given.
3. Date.
4. From whom obtained.
5. First attempt to settle.
6. Result.

B. Captain John Smith's explorations—Result.

C. Second Grant.
1. Charter.
2. From whom obtained.
3. To whom given.
4. Extent of territory.
5. Date.

D. Settlements.

1. First Settlement.
   a. By whom.
   b. Cause.
   c. Date.
   d. Location.
   e. Name, why so called.
   f. Location of intended settlement.
   g. Why did it materialize.
2. Second Settlement.
   a. Where.
   b. By whom.
   c. When.
   d. Leader.
   e. Indian name. Meaning.
3. Third Settlement.
   a. By whom.
   b. Cause.
   c. Date.
   d. Name, why so called.
   e. Location.
   f. Number.
   g. Charter.
      1. Provisions.
      2. From whom obtained.
      3. Results.
   h. Growth.
4. Settlers.
   a. Ships.
   b. Kind in each colony.
   c. Character of each colony.
   d. Number.
   e. Compare with those of Virginia
   f. Distinguish between Pilgrims, Puritans, Separatists, Independents, Non-conformists.
   g. Leaders in each.
      1. Character.
      2. Influence in Colony.
         Influence in History.
         Influence in Literature.
   h. Governors.

E. Mayflower compact.
   1. Provisions.
   2. When and by whom signed?

F. Growth of Plymouth of Old Colony.
   1. Result of 21st winter.
   2. Attitude of Indians.
   3. (a) Massassoit.
      1. His messenger.
      2. Treatment.
      3. Warning and its result.
      (b) Cononicus.
      1. Message.
      2. Answer.
      3. Results.
      (c) Treaty.

G. Government.
   1. Union of Colonies.
      (a) Date.
      (b) Cause.
      (c) Name.
      (d) Length of time it continued.
   2. Type. Why?
   3. Blue Laws—Governor Winthrop's evasion.
   4. Suffrage—to whom granted.
   5. Legislation—In whom vested.
      a. Appointment of commissioners.
      b. Meeting
      c. Powers
      d. Numbers

H. Troubles.
   1. Indian troubles.
      a. King Philip's War.
         1. Cause.
         2. Date.
         3. Events.
         4. Results.
         5. Cost to each side.
   2. Domestic troubles.
      a. Pilgrim Disturbances.
         1. Cause.
         2. Roger Williams.

3. Anne Hutchinson.
4. Quaker.
5. Salem witchcraft.
   a. Date.
   b. Leaders.
   c. Events.
   d. Results.

b. Oppression.
   1. Made a Royal Province.
   2. Enforcement of Navigation Acts.
   3. Refusal to obey.
   4. Result.
   5. The new governor—His attitude.

1. Growth of the Colony.
   1. In population.
   2. In commerce.
   3. Industries.
   4. Productions.
   5. First Thanksgiving.
   6. Schools.
   7. a. Free or public.
      b. College—Name, when and by whom founded, date, how supported at first.
   8. Condition at time of Revolution.

Supplementary Questions on Virginia, Maryland, and Massachusetts.

1. Tell what mission the following boats had: "Ark", "Dove", "Mayflower", "Speedwell", and "Sea Venture".
2. First coinage of money. Where? When? Why?
3. Tell of the first printing press.
4. What is meant by "Body of Libertus"?
5. Who was the "Apostle of the Indians"?
6. Who was the man who spoke with silver tongue?
7. How did Bloody Brook get its name?

Maine and New Hampshire.

1. Date.
2. Granted by whom?
3. Granted to whom?
4. Extent of land—from Merrimac to Kennebec.
5. Division of—Piscataqua river.
6. Settlements.

Maine—New Hampshire.
York—Portsmouth.
Wells—Dover.
Kittery—Exeter.
Hampton.

7. Union with Massachusetts.
8. Government—charter.

Rhode Island.

1. Granted to whom?
2. Granted by whom?
3. Date.
4. Cause of settlement.
5. Teachings of Roger Williams.
6. Teachings of Anne Hutchinson.
7. Settlements.
   1. Providence.
   2. Portsmouth.
   3. Newport.
8. Government.
   1. Independent.
   2. Charter Colony.
9. Indian Wars.
   1. Pequot.
   2. King Philip's.
10. Union with New England.
   1. Date.
   2. Other members of Union.
   3. Purpose of union.

Connecticut.

1. Origin of Name.
2. Granted to whom?
3. Granted by whom?
4. Claims of Dutch.
   Connecticut valley by exploration of Block.
5. Cause of settlement.
6. Settlements.
   1. Windsor.
   2. Wethersfield.
   3. Hartford.
   4. Springfield.
7. Dates.

8. Leaders.
   Thomas Hooker.
9. Government.
   1. Part of Massachusetts.
   2. Republic of Connecticut.
   3. Charter of Colony.
10. Connecticut Blue Laws.
11. Pequot War.
12. Union with New Haven.
13. Charter Oak.

New York.

1. Early explorers.
   1. Hudson.
   2. Block.
   3. May.
2. Claims of Dutch.
   1. Hudson Valley.
   2. Connecticut.
   3. Delaware Valley.
3. Claims of English.
4. Dutch West India Company.
   1. Purpose.
   2. Power.
5. Patrons.
6. Dutch Rule.
7. Duke of York.
8. Government.
   1. Under Dutch.
   2. Under Drake of York.
   3. Royal Colony.
9. Settlements.
   1. Fort Orange.
   2. New Amsterdam.
10. Granting of New Jersey.
11. Education.
12. Leisler's Rebellion.
13. Indian Wars.
   1. By Gov. Jieft's attempt to tax.
   2. Betrayal of Indians.

New Jersey.

1. Granting of.
2. Extent of New Jersey.
   1. Delaware to Hudson.

3. Sold to Quakers.
4. Settlements.
   1. Burlington.
   2. Elizabeth-town.
5. Date.
6. Government.
   1. Under Drake of York.
   2. Under Berkley and Carteret.
   3. As royal colony.

Pennsylvania.

1. Granted to whom?
2. Granted by whom?
3. Granted why?
4. Date.
5. Origin of name.
6. The Quakers.
7. Swedes claim to land.
8. Penn's treaty with Indians.
9. Rush of all nationalities to.
10. Mason and Dixon line.
11. Settlements.
    1. Philadelphia.
    2. Chester.
12. Government.
    1. By Penn.
    2. Great Law.

Delaware.

1. Granted to whom?
2. Granted by whom?
3. Claimed by Lord Baltimore.
4. Bought by Penn.
5. Bought why?
6. Settlers.
7. Government.
   1. By Penn.
   2. Separation from Pennsylvania.
8. Settlement.
   1. Wilmington.
   2. New Castle.

The Carolinas.

1. Granted to whom?
2. Granted by whom?

3. Groups of settlements.
   1. Albermarle.
   2. Carteret.
4. Classes of setlers.
   1. In North Carolina.
   2. In South Carolina.
5. Government.
   1. By proprietors.
   2. Grand Model.
   3. As royal colony.
6. Date.
7. Settlements.
   1. North Carolina.
      1. Wilmington.
      2. Newbern.
      3. Edenton.
   2. South Carolina.
      1. Charleston.
8. Indian Wars.
9. Spanish Invasion.

Georgia.

1. Date.
2. Founder—Oglethorpe.
3. Purpose of founding.
4. Extent.
   1. Savannah to Altamaha.
5. Class of settlers.
6. Government.
   1. As part of Carolinas.
   2. As Royal Colony.
7. The Moravians.
8. The Wesleys.
9. The Spanish Invasion.
10. Settlements.
    1. Savannah.
11. Occupations.

Reference Histories: McMaster's and Barnes' Brief History of United States, McMaster's School History of United States, Guerber's Story of the Thirteen Colonies, Ridpath's History of United States.

Colonial Government.

I. Local Government.
  A. General Classes.
    1. Town meeting type.
    2. County type.
    3. Mixture of the two types.
  B. The Three types.
    1. The town meeting—Mass.
    2. a. How composed.
      b. Time when called.
      c. Regular and special meetings.
      d. Powers.
      e. Town officers.
    2. County type. Virginias.
      a. County officers.
      b. Duties.
    3. Mixed type. Pennsylvania.
      a. Both town and county officers.
  C. Colonies possessing each type.

II. Central Government.
  A. Royal—Example Virginia.
    1. Governor appointed by King.
    2. Legislature—two houses.
      a. How chosen.
      d. Duties.
    B. Courts.
  B. Proprietory—Example; Penn.
    1. Governor—appointed by proprietor.
    2. Same as A 2.
    3. Same as A 3.
  C. Republican—Example—Rhode Island.
    1. Governor elected by the people.
    2. Same as A 2.
    3. Same as A 3.
  D. Colonies possessing each kind of government.

References: Fiske—Civil Government.
Ashley—American Government. Revised edition.
Hart—Essentials in American History.
James and Sanford—Government in State and Nation.

Colonial Indians—(a) Ancestors, (b) homes, (c) dress, (d) government, (e) religion, (f) education, (g) method of warfare, (h) location, (i) occupation, (j) myths and legends, (k) present abode, (l) relation to the United States government at present, (m) Wars of Tribes.

The Iroquois—New York.
The Mohawks—New York.
The Algonquins—North East.
The Muskogees—South East.
The Seminoles—Southern.
The Ottawas—Pontiac.
The Greeks—Southern.
The Illinois, etc.—Western.
Pequot—Mass.
Tuscaroras—Southern.
Yamassees—Southern.
Wampanoogs—King Philip, New Eng.
Narragansetts—New England.

References: Redway's, McMaster's, Mace's, McLaughlin's, Gordy's, Montgomery's, and Ashley's Histories of the United States, Indian Boyhood—Eastman, Old Indian Days—Eastman, Indian Song and Story—Fletcher, American Indians—Starr, Wigwam Stories—Judd, Old Indian Legends—Zitkala-Sa., Indian Stories Retold from St. Nicholas, The Story of the Indian—Grinnell, Hart's History of the United States.

French and French Posts in Ohio Valley.

(a) Trip up the St. Lawrence and through Great Lakes.

(b) The buried plates, (c) Flat Presque Isle, (d) Forts Le Boeuf and Venango, (e) Ft. Du Quesne, (f) Washington builds Ft. Necessity, (g) The Ohio Company and the English Claim to this, (h) Washington's first public service, (i) Why built, (j) Territory controlled.

References: See French and Indian War. Pioneers of Mississippi Valley—McMurry.

Intercolonial Wars:

(a) Countries in Europe involved, (b) Causes in Europe that brought on the war, (c) Principal events in each, (d) Time, (e) Parties at war, (f) Part played by Indians, (g) Results, (h) important men.

1. King William's War.
2. Queen Anne's War.
3. King George' War.
4. French and Indian War:—See Sixth Grade outline. Study Geography of country.

References: See Sixth Grade—The Old North West—Hinsdale, American Government—Hinsdale, Student's History—Channing, The Border Wars of New England—Drake, The Story of Washington—Seelye, Montcalm and Wolf—Parkman, The French War and the Revolution—Sloan, Expansion of the American People—Sparks.

Causes of the Revolutions and Conditions of the Colonies at the time.—(a) Effect of the French and Indian War, (b) Writs of assistance (c) Speech of James Otis, (d) Troops sent to America, (e) The Stamp Act, (f) The Virginia Resolutions, (g) The Stamp Act Congress, (h) Non Importation Agreements, (i) The Declaratory Act, (j) The Townhend Acts, (k) The Intolerable Acts—(1) Boston Port Bill, (2) Massachusetts Act, (3) Quartering Act, (4) The Quebec Act, (l) The Burning of the Gaspen, (m) The First Continental Congress, (1) Time, (c) Place, (3) Purpose of meeting, (4) Results of meeting, (n) The Boston Tea Party, (o) Boston Massacre, (p) The failure of George III, of England to appreciate the nature and disposition of the colonists, (g) America being located so far from England.

Condition of the Colonies—(a) Colonists determined and firm in their demands, (b) agriculture just becoming profitable, (c) Manufacturing just in its infancy. Necessities brought about by the war gave an impetus to manufacturing (d) Colonists had begun to demand a voice in the government and to respect the governors sent to the colonies by the King, (e) Growing discontent as shown by Boston Tea Party and Continental Congresses.

References: See results of the War.

Prominent Men and Events.

Washington, George (born in West Moreland County, Va., in 1732; died at Mt. Vernon, Fairfax County, Va., in 1799), first president of the United States. The most careful researches trace his ancestry to the north of England. His grandfather, John Washington was in Virginia in 1658. George lost his father when he was very young, and little is known of his boyhood. At the age of sixteen he was employed as a surveyor in the Shenandoah valley and his older brother gave him a military training. At the age of twenty he was sent by the Governor of Virginia to warn off the French who were establishing a chain of posts on the Ohio. As the warning was unheeded a military force was sent, of which Washington was second in command, and this was defeated. Then he accompanied Braddock's expedition against Fort Duquesne, as a member of Braddock's staff, and when the obstinate leader, refusing to listen to Washington's advice, was defeated and slain, the young lieutenent conducted the retreat. In 1759 he married Martha Custis, a wealthy widow, whose estate, joined with his own, made him the wealthiest man in the country. He lived at Mt. Vernon, conducted his plantations, was fond of hunting, was a member of the Legislature, and represented his state in the first and second Continental Congresses. When the War of Independence began in 1775, he was called to the chief command which he assumed under the famous elm at Cambridge, Mass. The struggle that ensued was long and varied. Sometimes it ap-

peared hopeless; but the steadfast courage and unfailing wisdom of Washington were large elements among the forces that led to success. When independence had been secured, he retired to his home till he was called to preside over the convention that framed the national Constitution. Under that Constitution he was President, 1789 to 1797; his skirmish with French (1754), accompanies Braddock's expedition, his account of Braddock's defeat, present at meeting of Virginia legislature (1765), at Valley Forge, captures Cornwallis's army at Yorktown, confers with Rochambeau, receives Cornwallis's surrender, his comments on the conduct of the war, comments on the state of the army, presides over the Constitutional Convention.

Jefferson, Thomas (born in Shadwell, Va., 1743; died in Monticello, Va., 1826), third President of the United States. He was educated at William and Mary College, where he was a devoted student. He studied law and became an industrious practitioner. At the age of twenty-six he became a member of the House of Burgesses, and in 1775 he took his seat in Congress. He was chairman of the committee to draw up a declaration of independence—the other members being Benjamin Franklin, John Adams, Roger Sherman, and Robert R. Livingstone—and the immortal document that resulted from their labors was mainly his work. Soon afterward he resigned his seat and set himself the task of reorganizing the government of Virginia. He succeeded in abolishing primogeniture and entail, and establishing religious freedom. He was Governor of the State in 1779-1781, and in 1783 was again in Congress, where he carried through the plan for decimal currency. In 1784 he was sent to France to negotiate commercial treaties, where he remained five years, and there he published his Notes on Virginia. He was Secretary of State in Washington's Cabinet, but resigned in 1794. He was a candidate for President, against John Adams, in 1796, but gained only the Vice-Presidency. In 1800 he was elected President by the House of Representatives, and in 1804 was reelected by the electoral college. The most important event of his administration was the purchase of Louisiana territory from France for $15,000,000.

He and John Adams died on the same day, July 4, 1826: writes the Declaration of Independence; his view of the Union; writes the Kentucky Resolutions; elected President; inaugural address; on the purchase of Louisiana; originates the Lewis and Clark expedition.

References: His Biography has been written by Henry S. Randall and George Tucker.

Franklin, Benjamin (born in Boston, Mass., 1706; died in Philadelphia, 1790), an American Statesman and philosopher. He was apprenticed to the printing trade, but (1723) ran away, first to New York, then to Philadelphia; founded the Philadelphia library (1731); established the American Philosophical Society 1743; was active in the founding of the University of Pennsylvania; while postmaster of Philadelphia (1737-

1753) he made that town the center of the postal system of the colonies; was made deputy post master general for the continent 1753; at the Albany Convention 1754 he proposed the first scheme ever proprounded for union of the colonies; was sent to England as special commissioner from the colonies 1757 and in 1762; was sent to Paris to obtain the aid and cooperation of France 1776; his experiments with electricity; his correspondence with Charles Thomson on the Stamp Act; his testimony before the House of Commons on the impolicy of that act; one of the framers of the Declaration of Independence; his scheme for a confederation of the colonies 1775; a member of peace commission; member of the Constitutional Convention.

Reference: Bigelow edited his Autobiography and his Works.

Henry, Patrick (born in Studley, Va., 1736; died in Red Hill, Va., 1799), an American lawyer and statesman; was admitted to the bar in 1760; general attention was called to his ability by means of "The Parson's Cause" 1764; elected a member of the House of Burgesses 1765; was first Speaker of the General Congress at Philadelphia 1774; retired to private life 1794; opposed the passage of the Virginia and Kentucky resolutions 1799; his opposition to the Stamp Act; elected Governor of Virginia; opposes the adoption of the Constitution.

References: Tyler, Patrick Henry; W. W. Henry, Patrick Henry; Life, Correspondence, and Speeches.

Jones, John Paul (born in Arbigland, Scotland, 1747; died in Paris 1792), an American naval officer. His name originally was John Paul, to which he added Jones for some reason of his own. He made several voyages to the West Indies, and visited Virginia, where his father was a planter. He was there when the War of Independence began, and entered the American naval service as a lieutenant. It is said that he raised on the ship Alfred the first American flag that ever floated, the one bearing the pine-tree and rattlesnake. In the sloop Providence he made a cruise of six weeks and took sixteen prizes. After other similar exploits, he sailed into European waters, harassed the British coasting-trade, attacked the town of Whitehave in Cumberland, and captured a sloop-of-war superior to his own. He took his prize and 200 prisoners in the harbor of Brest, and asked his Government for a better ship. After much delay he obtained an old Indiaman, fitted her as a warship, and re-christened her Bon Homme Richard, the French equivalent of Franklin's famous Poor Richard. In August, 1779, he sailed with a squadron of five vessels, and in a month made twenty-six captures of British vessels. Then followed the famous battle with the Serapis, off Flamborough Head. Congress voted a gold medal for Jones, and Washington wrote him a congratulatory letter. But his after-life was not successful or happy, though he was offered a rear-admiral's commission in the Russian navy, and he died in poverty. In 1905 his remains were

brought to the United States; His exploits; his victory over the Serapis; descends on European coasts, biographies by Sherbourne, Taylor.

George Rogers Clarke—(a) Saved the North West to the colonies, (b) States afterward formed out of territory, (c) Principal forts captured, (d) His early life and training, (e) His equipment for the expedition, (f) His route, (g) His treatment of the Indians, (h) Shows strategy, (i) See Clarke in Sixth Grade.

Benedict Arnold—(a) Expedition against Canada, (b) At Saratoga, (c) Turns traitor.

Colonel Moultrie—(a) At Fort Moultrie, (b) Places flag staff on fortifications.

Anthony Wayne at Stony Point.

Lafayette—(a) His home, (b) His enlistment in the American Army, (c) Becomes Washington's Aid, (d) Visits America in 1844.

Green—(a) His retreat into Virginia, (b) At Guilford C. H., (c) Regains South Carolina.

Pulaski's and Kosciusco's services to the Colonies.

John Stark at Bennington.

Morgan and Schuyler (a) At Bemis Heights, (b) At Stillwater, (c) At Saratoga.

Gates. (a) Command of the army of the South, (b) Capture of Burgoyne. See Sixth Grade for James Otis, Samuel Adams, John Adams, John Hancock, and Robert Morris.

Results of the War and Condition of the Country at its close.—(a) Colonies had contracted big debts and had no way of paying them, (b) There was no central government, (c) Everyone had a different opinion as to the kind of government that should be set up, (d) Plans proposed, (e) Colonists had been reduced to greatest poverty, (f) Had no factories to compete with rest of world in a commercial way (h) Natural resources of colonies were as yet undiscovered, (i) Financial system was on an unsecure basis, (j) Colonists had gained absolute independence, (k) Made possible the present United States with her advantages, (l) Brought out forcefully the importance of the man as an individual and his responsibility to the government.

Conditions of the Country: (a) Colonies disorganized, (b) No schools nor means of education, (c) Agriculture had been allowed to run down, (d) No manufacturing or commerce, (e) People eager and enthusiastic to improve their opportunities and establish a good government, (f) Began to organize a school system, (g) made plans for inter colony trade, (h) Met at Albany to formulate some place for a central government.

References: Washington—Abbott, The Men who Made the Nation—Sparks, Benjamin Franklin—Moore, Paul Jones—Hapgood, Historical Americans—Brooks, The American Revolution—Fiske, How

George Rogers Clarke Won the North West—Thwaites, Montgomery's, McMaster's, Gordy's, Mace's, Redway's, Ashley's, Hart's, Thomas', Channing's, and James, and Sanford's Histories of the United States, The True History of the American Revolution—Fiske, The War of Independence—Fiske, The American Revolution—Van Tyne.

Declaration of Independence.

I. Causes.
   1. Continued friction between England and Colonies.
   2. Influence of Samuel Adams, John Hancock and Patrick Henry.
   3. Gradual growth of feeling of independence.
   4. Thomas Payne's "Common Sense".

II. Resolution of Richard Henry Lee. June 7th, 1776.

III. How drawn up.
   1. Committee appointed.
   2. Members of Committee.
   3. Written by Jefferson.
   4. Reported to Convention July 2, 1776.

IV. Adoption and signing July 4th, '76.
   1. Debates.
   2. Principal Signers.

V. Analysis of Declaration.
   1. Statement of primary principles.
   2. Grievances against George III.
   3. Final Declaration.

References: Fiske—American Revolution.
Hart—Essentials in American History.
Wilson—History of American People, Vol. II.
Hart—Ed. Am. Nation Series.

Second Continental Congress and Articles of Confederation.

I. Second Continental Congress.
   1. Called by First Congress.
   2. Time when called. May 1775.
   3. Purpose.
      a. To provide a system of defence.
      b. Raise an army.
      c. Raise money.
      d. Provide military equipment.
   4. Important men who were members.
   5. Places of meeting.

6. How organized. (By electing Pres. and Sec'y.)
7. Why the Congress became the only government for the colonies.
8. Powers exercised by the Congress.
   a. Issued money.
   b. Borrowed money.
   c. Raised troops and appointed generals and officers.
   d. Carried on relations with foreign countries.
   e. Passed general laws for the country.
   f. Built a small navy.
   g. Issued Declaration of Independence.
9. Termination of the Congress in 1781 when Articles of Confederation were adopted.

II. Articles of Confederation.
1. How Articles were drawn up. (By a Committee).
2. When. 1777.
3. Purpose.
4. Ratification in 1781. (Reason for Delay.)
5. The government under the Articles.
   a. A central Congress.
   b. How the Congress was chosen.
   c. Number. (Not less than two nor more than seven delegates from each state.)
   d. The Committee of States.
6. Powers.
   a. Levy taxes.
   b. Regulate trade.
   c. Borrow money.
   d. Raise and equip an army and navy.
   e. Carry on foreign relations.
7. Defects.
   a. No executive power.
   b. No system of courts.
   c. No way of enforcing the raising of troops.
   d. Congress poorly organized.
   e. No way of enforcing the collecting of taxes, payment of debts.
   f. No way to enforce regulation of trade.
   h. No way to compel obedience of states.
8. Articles terminated in 1789, when Constitution went into effect.

References:—

A. For pupils.

Elementary Histories of the United States by McLaughlin and Van Tyne, Montgomery, Foremen, McMaster, Gordy, Mace, Redway, and Thomas.

B. For Teachers.

Hart's Essentials in American History.
McLaughlin, History of the American Nation.
Adams and Trent, History of the American Nation.
Wilson, History of the American Nation.
McMaster's History of the United States, Vol. I.
James and Sanford's American History.
Ashley, American History.

Social and Industrial Conditions in the Colonies at the Close of the Revolution.

I. Character of the population.
   1. Principal nationalities and where located.
   2. Energy and enterprise of the people.

II. Occupation of the People.
   1. Agriculture of the people.
      a. In North—free labor.
      b. In South—slave labor.
         1. Slave life.
         2. Plantation system.
         3. Character of agriculture.
      c. Life of the pioneers.
         1. Habits.
         2. Dress.
         3. Dwelling and furnishings.
         4. Neighborhoods.
      d. Principal products.
         1. North.
         2. South.
      e. Farming tools.
   2. Manufacturing.
      a. Household manufacturing.
      b. Attempts to manufacture but forbidden by England.
      c. The spinning wheel and making of cloth.
      d. Making of tools.

3. Commerce.
   a. Colonies engaged in commerce.
   b. The inter-colonial trade.
   c. Trade with Africa and West Indies.
   d. Trade hindered by foreign wars.
4. (Very little carried on.)

III. Transportation.
1. Roads.
   a. Indian trails and pack horses.
   b. Corduroy roads.
   c. Plank roads.
   d. Beginning of macadamized roads.
2. River trade and sail boats.

IV. Education and Schools.
1. In North.
   a. The Massachusetts law.
   b. The district schools.
   c. Character of the school houses.
   d. Studies.
   e. The school master.
   f. Colleges.
2. In South.
   a. No schools.
   b. The private tutors for children of aristocrats.
   c. Colleges.

V. Literature—The principal writers.

VI. Religion.
1. The principal religious sects and where located.
2. Religious toleration.

References.

For teachers.

Hart, Essentials in American History, Chapter XIV.
Bogant, Economic History of the United States.
Webster, History of Commerce.

For pupils.

Elementary Histories of United States by—Forman, Thomas, Montgomery, McLaughlin and Van Tyne, McMaster, Gordy, and Redway.

EIGHTH GRADE.

Graph showing time to be given to each subject in the Eighth Grade History. One inch equals one week of time.

Review Colonial History
Review Great Men and Part in Revolutionary War
Review Articles of Confederation
Constitution Convention
Washington's Administration
John Adams' and Thomas Jefferson's Administration
James Madison and War of 1812
James Monroe's Administration
John Q. Adams', and Andrew Jackson's Administration
Martin Van Buren's, William H. Harrison's and John Tyler's Administration
James K. Polk's Administration, Mexican War, and Territorial Expansion
Zach. Taylor and Millard Filmore
Franklin Pierce and James Buchanan
Condition of the Country, A. Lincoln, and Causes of Civil War
Great Men and Events of Civil War
Results of Civil War and Condition of Country
Andrew Johnson's Administration and Reconstruction
Ulysses S. Grant
Rutherford B. Hayes, Jas. A. Garfield, and Chester A. Arthur's Administration
Cleveland's and Harrison's Administration
McKinley and War with Spain
Roosevelt's Administration
Wm. H. Taft's Administration
Territorial Expansion
Politics, Political Parties and Civics
Industrial Development
Review

The Constitutional Convention.

I. Calling of Convention—Annapolis Convention.
II. Time when called and place. May 1787, at Philadelphia.
III. Purpose and number of members.
IV. Prominent men.
V. Sources of the Constitution.
  1. Custom and form of the English Government.
  2. The colonial government.
  3. State Constitutions.
VI. Plans submitted.
  1. Hamilton's.
  2. Virginia.
  3. Connecticut.
  4. New Jersey.
  5. Pinckney.
VII. Parties in the convention.
  1. Large state.
  2. Small state.
VIII. Compromises.
  Connecticut on representation.
  2. Representation—Slavery.
  3. Taxation—Slavery.
  4. Regulation of commerce.
    a. Slave trade.
    b. No duties on exports.
IX. Officers and Committees.
  1. Pres.—Washington.
  2. Secy.—Jackson.
  3. Committees.
    a. Detail.
    b. Style. Gouverneur Morris wrote final draft.
X. Termination of Convention. Sept. 1787.

References:

Fiske—Critical Period of American History.
McMaster—History of United States, Vol. I.
Hart—Essentials of American History.
Ashley—American Federal State.
Ashley—American Government.
Wilson—History of American People, Vol. III.

Washington's Administration:—(a) Time, (b) Vice President, (c) Creates a cabinet, (d) Amendments to the Constitution, (e) Organizes

courts, (f) Decides on a permanent place for the Capitol, (g) Hamilton's plan for raising money with which to start the new government,—

(1) Important duties.
(2) An excise on the manufacture of whiskey.
(3) The United States debt to be funded.
(4) The National government to assume the State Debts.
(5) A national bank to be established.
(6) Protective import duties.

(h) The Western Indians, (i) Proclamation of neutrality, (j) Citizen Genet, (k) Jay's Treaty, (1) Whiskey insurrection, (m) The Spanish Treaty, (n) The First Census, (o) Western Emigration, (p) Cotton Gin invented.

References: Montgomery's Leading Facts of American History, McLaughlin and Van Tyne's History of the United States, Hart's Essentials in American History, Alexander Hamilton—Lodge, The Men Who Made the Nation—Sparks, The Making of the Nation—Walker, The Federalist System—Bassett.

Adam's Administration.

A. Introductory Remarks.
   1. Date.
   2. No. terms.
   3. Native State.
   4. Vice Pres.
   5. Nickname.

B. Domestic Affairs.
   1. Alien and Sedition Laws.
   2. Virginia and Kentucky Resolutions.
   3. Death of Washington.
   4. Removal of Capital.
   5. Frie's Rebellion.
   6. Election of Jefferson.

C. Foreign Affairs.
   1. The X. Y. Z. Affair.
   2. Preparation for war with France.
   3. Naval war with France.

Jefferson's Administration.

A. Introductory Remarks.
   1. Date.
   2. No. terms.
   3. Native State.
   4. Vice Pres.
   5. Nickname.

B. Domestic Affairs.
   1. Purchase of Louisiana.
   2. Lewis and Clark Expedition.
   3. Hamilton—Burr Duel.
   4. Burr's Treason.
   5. Invention of Steamboat.

C. Foreign Affairs.
   1. War with the Barbary States.
   2. Trouble with England.
      (a) Orders in Council.
      (b) Impressment of Seamen.
   3. Trouble with France.
      (a) Berlin Decree.
      (b) Milan Decree.
   4. Embargo and Non-Intercourse Act.
   5. Chesapeake and Leopard Affair.

1. McMaster's Brief History of United States.
2. Montgomery's Leading Facts of American History.
3. Eclectic History of United States.
4. Mace's, Gordy's, McLaughlin's and Van Tyne's History of United States.
5. Territorial Growth—Mowry.

James Madison's Administration: (a) Time, (b) Vice President, (c) Macon Bill No. 2, (d) Indian Wars, (e) Madison's Effort to make a treaty, (f) Attitude of Congress, (g) Deception of Napoleon, (h) The War of 1812—Causes, (1) Impressment of seamen, (2) The Henry Letters, (3) The Indian Ravages. Events. (1) Importance of Detroit —Hull's surrender, (2) Constitution & Guerriere, (3) O. H. Perry on Lake Erie, (4) Burning of Washington, (5) MacDonough's Victory on Lake Champlain, (6) Jackson's Victory at New Orleans, (7) The Hartford Convention—(a) Purpose, (b) Prominent men, (c) Results of meeting.

Results of the War: (1) Gave the United States independence on the sea, (2) Served as a lesson to foreign nations, (3) was an impetus to local industries, (4) Encouraged a protective tariff. (i) Star Spangled Banner written—1814.

References: Poem "Perry's Victory"—Percival, Old Ironsides—Holmes, McMaster's Brief History of the United States, Montgomery's American History, Gordy's History of the United States, Hart's Essentials of American History, McLaughlin and Van Tyne's History of the United States, The Rise of American Nationality—Babcock, Winning of the West—Roosevelt.

Monroe's Administration.

A. Introductory Remarks—Time

Vice Pres.

B. Domestic Affairs.

1. Era of Good Feeling.
2. President's journey through the states.
3. Rise of the Slavery question.
   (a) The Missouri Compromise.
4. Building of the National Road.
5. Rapid Growth of the West.
6. Rise of the Protective Tariff.
7. Improvements to meet the rapid growth of the West. Internal improvements.
8. Erie Canal begun.
9. Admission of 5 new states.
10. Our dealings with the Greek Indians.
11. Visit of La Fayette.
12. Breaking up of the Republican party.
13. Election of J. Q. Adams.
14. Panic of 1819-20.

C. Foreign Affairs.

1. The Treaty with Spain settling boundaries.
2. The acquisition of Florida.
3. The South American Republics.
4. The Holy Alliance and its relation to the United States.
5. The Monroe Doctrine.

References:

McMaster's Brief History of U. S.
Montgomery's Leading Facts in American History.
Eclectic History of the U. S.
Fiske's Critical Period, p. 71-76.
See Adams and Jefferson.

John Q. Adams.

A. Introductory remarks—1. Time; 2. Vice Pres.

B. Domestic Affairs.

1. Completion of the Erie Canal.
2. First Passenger Railway.
3. First Locomotive 1830.
4. Organism of 1st Temperance Society, 1826.
5. New Political Activities.
6. Tariff of Abomination 1828.
7. The First American Congress.

C. Sterling character of Pres. Adams.

References: See Jackson's Administration.

Jackson's Administration.

A. Introductory Remarks.
   1. Time.
   2. Vice Pres.

B. Character of Jackson.

C. Domestic Affairs.
   1. Introduction of Spoils System.
   2. The rapid growth of the Anti-slavery movement.
   3. Channing, Garrison.
   4. The Gag Rule.
   5. Negro Insurrection in Va.
   6. The Webster—Hayne Debate.
   7. S. C. resists the Tariff.
   8. Calhoun and Nullification.
   9. Nullification of S. C.
   10. Jackson's handling of Nullification.
   11. Jackson's fight against the U. S. Banks.
   12. Era of Speculation.
   13. Our Country out of debt.
   14. Distribution of the surplus.
   15. Specie circular.
   16. Rise of American Literature.
   17. Rise of Whig party.
   18. Compromise of 1833.
   19. The Force Bill.
   20. Anti-Masonic Party.

D. Foreign Affairs.
   1. The French Spoliation Claims.
   McMaster's Brief Hist. of the U. S.
   Montgomery's Leading Facts.
   Eclectic Hist. of U. S.
   Barnes Hist. of U. S.
   World's Famous Orators—W. J. Bryan.
   See Adams and Jefferson.

Van Buren's Administration.

A. Introductory Remarks.
   1. Date.
   2. Vice Pres.

B. The Panic of 1837.
   1. Causes of Panic.
   2. Stoppage of Trade.
C. Establishing of Independent Treasury.
D. Rise of the Mormons.
E. Immigration.
F. Organization of Steamship Lines and Express Companies.
G. Spectacular Campaign of 1840.
H. The Carloins Affair.
   Reference:—See former Admin.

Harrison and Tyler's Administration.

A. Introductory Remarks.
   1. Date.
   2. Vice Pres.
B. Death of Pres. Harrison.
C. Tyler and the Whigs Quarrel.
D. The Webster-Ashburton Treaty.
E. Invention of the telegraph.
F. Dorr's Rebellion.
G. The Anti-Renters.
H. Discovery of Anaesthesia.
I. The Republic of Texas.
J. Interesting Campaign of 1844.
K. Annexation of Texas.
   Reference: See former Admin.

James J. Polk's Administration: (a) Time, (b) Vice President, (c) Oregon territory,—(1) Dr. Whitman's Journey to Oregon, (2) How we got Oregon, (3) The treaty, (d) War with Mexico—Causes (1) Annexation of Texas, (2) Eagerness of slavery people to extend the slave territory to counteract the Oregon territory, (3) Mexico had been slow to settle claims for outrages against persons and property of Americans, (4) Polk was desirous of annexing California and a war with Mexico would furnish an excuse.

Prominent Men:

(a) Zachary Taylor.
   (1) His campaign.
   (a) Palo Alto.
   (b) Resaca de al Palma.
   (c) Monterey.
   (d) Buena Vista.

(b) Winfield Scott.
  (1) His campaign.
  (a) Vera Cruz.
  (b) Cerro Gordo.
  (c) Mexico City.

(c) Kearney and Fremont take California. Peace Treaty.
  (a) New Mexico and California annexed.
  (b) Mexico gave up claim to Texas.
  (c) Trained some soldiers for the Civil War.

(e) The Wilmot Proviso.

References.

See previous administrations. War with Mexico—Ladd. Westward Expansion—Garrison, Politics and Alavert—Smith, Territorial Growth—Mowry.

Taylor and Fillmore's Administration.

A. Introductory Remarks.
  1. Date.
  2. Vice Pres.

B. The Rapid Growth of California.

C. Crisis in the slavery situation.

D. Application of Cal. for statehood.

E. Compromise of 1850.

F. Comparison of North and South.

G. Death of Pres. Taylor.

H. The Gadsden Purchase.

I. Personal Liberty Laws.

J. The Underground Railway.

K. Publication of Uncle Tom's Cabin.

L. Death of old political leaders.

M. New leaders taking their places.

N. Silent Revolution in feeling on the slavery question.

O. Effect of Discovery of gold in California in 1848.

P. Fugitive Slave Law.

References:

McMaster's Brief History of U. S.
Montgomery's Leading Facts, etc.
Eclectic History of U. S.
Barnes History of U. S.
See Standard School Histories.

Pierce's Administration.

A. Introductory Remarks.
   1. Date.
   2. Vice Pres.
B. World's Fair in New York City.
C. Kansas-Nebraska Act.
D. Rise of the Modern Republican Party.
E. Disintegration of the old parties.
F. The struggle for possession of Kansas.
G. Treaty with Japan.
H. Treaty with China.
I. Wendell Phillips and Wm. Lloyd Garrison and the Anti-Slavery movement.
J New England Emigrant Aid Society.
K. Douglas, Chase, Seward and Sumner and their influence on the Kansas affair.

Buchanan's Administration.

A. Introductory remarks.
   1. Date.
   2. Vice President.
B. The Dredd Scott Decision.
C. The Panic of 1857.
D. Discovery of oil in Penn. 1859.
E. The Lincoln Douglas Debates.
F. The John Brown Raid.
G. The Campaign of 1860 and election of Lincoln.
H. Secession of the Southern States and forming of the Southern Confederacy.
I. "Star of the West" fired on.
J. The Le Compton Constitution in Kansas.
K. Perry's expedition to Japan.

References: McMaster's Brief History of United States, Montgomery's Leading Facts, etc., Eclectic History of U. S. Barnes' History of United States, The Men who Made the Nation—Sparks, James' and Sanford's U. S. History, Westward Expansion, Garrison, Division and Reunion—Wilson, Politics and Slavery—Smith.

Condition of the Country Prior to Civil War.

Abraham Lincoln and the Causes of the War.
(a) North and South divided on questions of
   (1) Slavery.
   (2) State's rights.
   (3) Tariff.

(b) Missouri Compromise, (c) Clay's Compromise of 1833 and 1850, (d) Kansas and Nebraska Bill, (e) Dredd Scott Decision, (f) Publication of Uncle Tom's Cabin by Harriet Beecher Stowe, (g) Wilmot Proviso, (h) Intense excitement of the people over the question of slavery, (i) Radical stand taken by leaders on both sides, (j) The Knight of the Golden Circle, (a secret organization) (k) John Brown's Raid, (l) The Underground Railroad, (m) The Lincoln-Douglas debates, (n) The extreme views of the presidential candidates in 1860 and the election of Lincoln, (o) The secession of South Carolina, (p) Personal liberty Bills.

A. Lincoln—See Sixth Grade.
Republican convention at Chicago 1860.
Democratic Convention at Charleston, Baltimore, 1860.
Candidates:

(1) Republican.
President—Abraham Lincoln of Illinois.
Vice President—Hannibal Hamlin of Maine.

(2) a. Democratic—Popular Sovereignty.
President—Stephen A. Douglas of Illinois.
Vice President—Herschel V. Johnson of Georgia.

b. Democratic—State Rights.
President—John C. Breckenridge of Kentucky.
Vice President—Gen. Joseph Lane of Oregon.

(e) Old Whig Party.
President—John Bell of Tennessee.
Vice President—Edward Everett of Massachusetts.

Arguments for Secession.

1. Seccession was admitted as constitutional by most public men.

2. To bring pressure on the North to readmit them on better trade terms.

3. It was the best peaceful remedy for the trade differences between the North and South.

4. The North in their eagerness to make money had lost sight of the general welfare of the country.

Arguments for Secession continued.

5. The North encouraged the feeling of hatred toward slavery.

6. The North was not fair in the admission of States.

7. The election of Lincoln was an act of hostility aimed directly at the South.

Arguments against Secession.

1. The United States government is inviolate and the states surrendered their individual rights when they entered the Union.

2. The South were doing everything in their power to increase the slave territory even to the point of resarting to force.

3. The South were violating the rights of Negro citizens.

4. The Border warfare in Kansas showed the South were willing to resort to fraud and violence.

5. The Slave power had long been a controlling factor in the government.

6. Secession would be destructive to a centralized government.

Great Men and Events of the Civil War.

Lincoln, Abraham (born in Hardin County, Ky., 1809; assassinated in Washington, 1865), sixteenth President of the Unied States; elected President; his first speech in the Douglas debate; calls for volunteers; electoral vote of; his arguments against the right of secession; proclaims emancipation; his Gettysburg address.

References: Lives by Nicolay and Hay, Herndon, Lamon, Shurz and Arnold.—"See Great Events."

McClellan, George Brinton (born in Philadelphia, 1826; died in Orange, N. J., 1885), an American soldier. He studied two years at the University of Pennsylvania, and then entered the Military Academy at West Point, where he was graduated in 1846, second in his class. He served in the Mexican War as lieutenant of engineers, and received promotions for gallantry. After the war he was engaged in explorations and surveys at the West, and in 1855 was a member of a military commission sent to observe the operations in the Crimea. When the Civil War began he was a railroad officer living in Cincinnati. He was appointed major-general of volunteers, and gained several successes against the Confederates in West Virginia, which caused his promotion to the command of the Army of the Potomac. This he reorganized and disciplined, and in the spring of 1862 moved it by water to Hampton Roads, whence it marched up the peninsula to attack Richmond. After the failure of this campaign and the defeat of Pope in Virginia, Lee's Confederate Army marched north into Maryland. McClellan was hastily recalled to the command, and defeated Lee at Antietam; but because of his failure to follow and destroy the enemy he was relieved of his command. In 1864 he was the Democratic candidate for President, against Lincoln and was elected Governor of New Jersey in 1877; at Antietam; his peninsula campaign. References: McClellan's Own Story; Johnson and Buell, Battles and Leaders of the Civil War; Comte de Paris, History of the Civil War in America.—"Great Events."

Sherman, William Tecumseh (born in Lancaster, O., 1820; died in New York, 1891), an American soldier. He was graduated at West Point (140), served in Florida till 1842, and in California at the time of the Mexican War; resigned 1853 and engaged in the banking business in San Francisco; removed to New York, 1857; to Leavenworth, Kans. (1858), and there practised law; elected president of proposed military

academy in Louisiana (1859); was superintendent of the academy at the outbreak of the Civil War, in which his services began with his acceptance of a colonelcy in the National army (1861). He served with great distinction throughout the war, and was made major-general in the regular army (1864); lieutenant-general (1866); general and commander of the army (1864). He retired in 1884; victorious in the West, at Bull Run, in Vicksburg campaign; attacks Johnston, his Atlanta campaign and march to the sea; burns a part of Atlanta; begins his march; destroys Georgia Central Railroad; his "bummers"; occupies Savannah.

References: Memoirs of General William T. Sherman, by Himself; lives by Bowman and Irwin, and Force; Scribner, Campaigns of the Civil War; Pollard, The Lost Cause, "Great Events."

Grant, Ulysses S. (born in Point Pleasant, Clermont County, Ohio, 1822; died at Mt. McGregor, near Saratoga, N. Y., 1885), an American soldier, eighteenth President of the United States. He was graduated at West Point in 1843; served through the Mexican War (1846-1848); resigned from the army in 1854, and settled in St. Louis; removed to Galena, Ill., in 1860, and entered the leather trade with his father. Was appointed colonel of the Twenty-first Illinois Infantry (1861); commissioned brigadier-general of volunteers (1861). His great victories were Fort Donelson, Shiloh, Vicksburg, Chattanooga, anl Appomattox. After the Civil War, the end of which he did so much to bring about, he was made general (1866); was Secretary of War and interim from August, 1867, to January, 1868; elected President on the Republican ticket in 1868 and re-elected in 1872; made a tour round the world in 1877-1879; retired as general (1885); captures Fort Donelson; takes command in Virginia; in Vicksburg campaign; his victory at Champion's Hill; attacks Vicksburg; his terms of surrender; transferred to the East; his characteristics anl his overland campaign; account of Lee's surrender.

References: Grant, Personal Memoirs; life by Dana and Wilson; Badeau, Military History of Ulysses S. Grant; Marshall, Ancestry of General Grant; Young, Around the World with General Grant.—Great Events.

Davis, Jefferson, (born American Statesman, President of the Confederate States; educated at Transvaal College, Ky., and at West Point; served in the army 1828-1835; was a presidential elector 1844; member of Congress 1845, served in the Mexican War, being present at the battles of Monterey and Buena Vista; U. S. Senator (1845-1851); Secretary of War (1853-1857); U. S. Senator (1857-1861); elected President of the Confederate States (1861); at the close of the war was imprisoned for two years in Fort Monroe; his argument for the right of secession; at the Battle of Bull Run, opposes Johnston's plan to attack McClellan.

Additional References: Pollard, The Lost Cause; Greeley, The American Conflict; Victor of the Southern Rebellion; and biographies by Alfreund (friendly) and Pollard (unfriendly). "Great Events".

Lee, Robert Edward (born in Stratford, Westmoreland County, Va., 1807; died in Lexington, Va., 1870), an American Soldier, son of the Revolutionary general Henry Lee ("Light Horse Harry"); was graduated at West Point 1829, ranking second in a class of forty-six, and commissioned second lieutenant of engineers; served in the Mexican War, becoming chief of staff to General Scott; Brevetted colonel for services at Chapaltepec; assigned to command of the Military Academy at West Point (1852); on duty in Texas (1855); commanded the troops that took John Brown at Harper's Ferry (1859); resigned his commission and entered the Confederate service (1861); from 1865 to 1870 was president of Washington and Lee University, at Lexington, Va.; in Mexican War, invades the North, at Antietam, commands in Virginia, opposed McClellan in Peninsula campaign at Malvern Hill, his Gettysburg campaign, in Wilderness campaign, surrenders his army at Appomattox. Additional references; lives by Cooke, Childe, and Long; Pollard, the Lost Cause; Greeley, The American Conflict; Johnson, History of the War of Secession; Victor, History of the Southern Rebellion and Campaigns of the Civil War; Davis, Rise and Fall of the Confederate Government; Champlin, Young Folk's History of the War for the Union; Swinton, Campaigns of the Army of the Potomac. "Great Events".

Meade, George Gordon (born in Cadiz, Spain, 1815; died in Philadelphia, 1872), an American soldier. He was graduated at West Point (1835); served in the Mexican War; commanded a brigade of volunteers in the army of the Potomac 1861; served in the Peninsula campaign (1862); commanded a division at Antietam and at Fredericksburg (1862), and a corps at Chancellorsville; commanded the army of the Potomac from June 28, 1863, till the end of the Civil War; was promoted major-general in the regular army (1864); commanded the military division of the Atlantic, and afterward (1866-1868) the Department of the East, then that of the south, and from March, 1869, till his death the Atlantic division again; commands the Federal army in the Gettysburg campaign, succeeds Hooker, moves toward Gettysburg, his dispositions, changes order of battle on Sickles, his victory and losses at the surrender of Lee. "Great Events."

Sheridan (Phil H.) born in New York of Irish parents, graduate of West Point; served on Western Frontier, commanded a brigade then a division in Buell's army 1862, fought at Perryville, Stone River, Chickamauga, and Chattanooga. Commanded the cavalry troops in Army of Potomac. Repulsed early in Valleys of Shenandoah, Opequar Creek, Fishers Hill, Cedar Creek, Famous Ride.

Additional References: Johnson and Burl, Battles and Leaders of the Civil War; Walker, History of the Second Army Corps; Comte De

Paris, History of the Civil War in America; Johnson, History of the War of Secession; Greeley, The American Conflict and Great Events (Compiled).

Results of Civil War and Condition of Country.

(1) Four million slaves freed, (2) It established the principle that there was no such thing as State secession from the Union, (3) It gave equal opportunity to the negro, (4) It proved the courage and patriotism of the people of the United States, (5) It showed the permanency of the United States Government, (6) It left the North in a dangerous position—that of victors over their brothers, (7) It left the South humiliated and helpless (8) It destroyed the property of the South and left the people homeless, (9) It paved the way for a greater United States, (10) It emphasized the Declaration of Independence, (11) It contributed to the development of Southern resources and industries, (12) It broadened the minds and sympathies of the whole people.

1. North—(a) Big debt on United States government, (b) Business and trade disorganized, (c) Gave opportunity to unscrupulous men to go South and override the country, (d) Showed foreign nations the strength of the U. S. Government.

2. South—(a) Left homeless, (b) Property gone, (c) 4,000,000 negroes to live and not yet having learned to rely on self, (d) Country full of carpet baggers, (e) South taught the necessity of developing their industries and resources, (f) Opened the way for public education, (g) Made the people more cosmopolitan.

References: Barnes', McMaster's, Montgomery's, Mace's Van Tyne's, Formen's, and Hart's United States Histories, Division and Reunion—Wilson, Outcome of the Civil War—Hosmer, A Bird's-eye View of our Civil War—Dodge, The Civil War and the Constitution—Burgess, Tariff History—Taussig.

Andrew Johnson and Reconstruction of the South.

I. Assassination of Pres. Lincoln—Johnson takes oath of office.

II. Life and Character of Pres. Johnson.

III. Condition of South at Close of War.

1. Condition and character of the Negroes.
2. Agriculture and lands.
3. Industry.
4. Roads and railroads.
5. The "Poor Whites."
6. The former slave holders.

IV. Theories of Reconstruction.
1. Presidential Theory.
2. State Suicide Theory.
3. Forfeited rights.
4. Conquered province theory.

V. Johnson's Policy.
1. Issues proclamation of amnesty. May, 1865.
2. Carries out presidential theory. 1865.
   a. Appoints governors in Southern States.
   b. Each state forms new government.
3. The Thirteenth Amendment adopted 1865.
   a. What amendment is.

VI. Apposition of Congress.
1. Reasons.
   a. The "Black Codes."
   b. Desire to punish the South.
   c. Hatred of president.
   d. Desire to continue the Republican party in power.
2. Johnson denounces Congress.
3. Freedman's Bureau, and Civil Rights Bill, and Fourteenth Amendment.
4. Tenure of office act.
5. Removal of Stanton.
6. Impeachment of the President.

VII. Congressional Reconstruction.
1. Method.
   a. South divided into districts.
   b. Military governor in each.
2. Results.
   a. The "Carpet-bag" governments.
   b. Negro control.
   c. Corruption.
   d. Demoralization of finances and state debts.
3. Southern apposition.
   a. Activity of young Southerners.
   b. Ku Klux Klan.

VIII. Foreign Questions.
1. Mexico.
2. Purchase of Alaska.
3. Burlingame and Treaty with China.

References: For teachers. Rhode's, McMaster's, and Wilson's History of United States, Hart's Essentials in American History.

For pupils: Any of the Elementary Texts on American History.

Grant's Administration.

A. Biography.
  1. Short sketch of his life.
  2. Politics.
  3. Opponents.
  4. Term of office.
  5. Vice President.

B. Inauguration.
  1. Discourtesy of Johnson.

C. Chief Events.

1. Railroads.
  A. Union Pacific.
    1. Length and extent.
    2. Time of building.
    3. Cost.
  B. Central Pacific.
    1. Extent and location.
    2. Connection with Union Pacific.
    3. Effect upon the country.

2. Finances.
  A. Fiske and Guild Scheme.
    1. Plan.
    2. Grant connected.
    3. Black Friday.
    4. Government interference.
    5. Result.

3. B. Tweed Ring.
    1. Plan of operation.
    2. Exposure.
    3. Arrest of Tweed.
    4. His escape, recapture, imprisonment.
    5. Proposed bribe to Thos. Nast, cartoonist.
  C. Credit Mobilier.
    1. Oakes Ames.
    2. Investigation.
    3. Effect of scandal.
  D. Whiskey Ring.
    1. Date.
    2. Where.
    3. Plan.

E. Panic 1873.
   1. Cause.
   2. Duration.

3. Legislation.
   A. Fifteenth Amendment.
      1. Passage and provisions.
      2. Ratification.
      3. Reconstruction complete.
   B. Force Bill—Passage and provisions.
   C. Amnesty Act—Passage and provisions.
   D. Plan to buy San Domingo.
      1. Action of Senate.
      2. Senate.
   E. English Quibbling.
      1. Washington treaty.
      a. General Tribunal.
         1. Representatives—Number.
         2. Place of meeting.
         3. Duties.
         4. Awards—Alabama Claims.

Northwest Boundary.

   F. Establishment of Weather Bureau.
      1. Date.
      2. Duties.
   G. Coinage Act of 1873—Effect.
   H. Purchase of Alaska—From whom?—Price?

4. Political Quarrels.
   A. In Louisiana.
      1. Kellogg government.
      2. Carpet baggers, scalawags.
   B. In South Carolina and other states.
   C. Civil War in Arkansas.
      1. Grant's Action.
      2. End of Conflict.
   D. Ku Klux Klan.

5. Indian Wars.
   A. Modoc.
      1. Cause.
      2. Date.
      3. Plan of government—Its frustration.
      4. Leaders of U. S.
      5. Result.

B. Sioux.
1. Cause.
2. Date.
3. Leaders.
4. Custer's Massacre.
5. Termination.

6. New State.
A. Name, Date, Nickname.

7. Three Fires—Location, Extent.

8. Centennial.
A. Where.
B. When.
C. Opening.

9. Invention.
A. Electric Light.
B. Telephone.

10. Presidential Campaign.
A. Parties in the field.
B. Issue.
C. Candidates of each party.
D. Result.

References: See preceding administrations.

Hayes.

A. Biography.
1. Sketch of Life.
2. Politics.
3. Opponents.
4. Term of office.
5. Vice President.

B. Chief events.

1. Withdrawal of troops from South.

2. Domestic troubles.
A. Strikes.
1. Railroad.
a. Cause.
b. Leader.
c. Roads affected.
d. Riots.
1. Where.
2. How quelled.
3. Result.

B. Coal Miners.
1. Molly McGuire.
a. Tramp McKenna.
b. End of band.

3. Indian Troubles.
A. Nez Perves.
1. Chief.
2. Plan.
3. Opponents.
4. Results.
5. Chief Joseph's visit.

4. Yellow River.

5. Imprisonment.
A. On Mississippi.
1. At Mouth.
a. Need.
b. Plan.
c. Engineer.
d. Accomplishment and result.
2. At source.
a. Capt. Jonathan Carver.
b. Wm. Morrison.
c. Lieut. Pike.
d. Schoolcraft.
e. How named.

6. Finances.
A. Paper money—Its value before and after the war.
B. National Debt.
C. Silver.
1. Redemption of Specie.
2. Bland Silver Bill—Effect?

7. Legislation.
A. Treaty with China.
1. Date.
2. Provisions.
B. Halifax Commission.
1. Verdict.

8. Grant's trip around World.

9. Presidential Campaign.
a. Parties in the field.
b. Issue.
c. Candidates of each.
d. Result.

References: See Preceding Administrations.

Garfield and Arthur.

A. Biography.
   1. Sketch of life.
   2. Politics.
   3. Opponents.
   4. Term of office.
   5. Vice President.

B. Chief Events.
   1. Star Route Fraud.
      a. Prosecution.
      b. Result.
   2. Assassination of President.
   3. New President.
      a. Sketch of his life.
   4. Legislation.
      a. Civil Service—Date—Provisions.
      b. Letter postage reduced.
      c. Alien Labor Law—Provisions—Date.
      d. Anti-Polygamy Bill.
   5. Improvements.
      a. Suspension Bridge.
         1. Location.
         2. Between what cities.
         3. Time in building.
         4. Length and structure.
   6. Celebrations.
      a. Yorktown.
      b. Cotton Centennial.
   7. Explorations.
      a. Of Alaska.
         1. When.
         2. By whom.
         3. Result.
      b. North Pole.
         1. By whom.
         2. Difficulties.
         3. Relief party.
         4. Rescue.
         5. Result.
   8. Presidential Campaign.
      a. Parties.
      b. Issue.
      c. Candidates.
      d. Result.

Cleveland's First Term.

A. Biography.
  1. Sketch of Life.
  2. Politics.
  3. Opponents.
  4. Term of office.
  5. Vice President.

B. Chief Events.
  1. Troubles.

A. Indians.
  1. Apache.
    a. Cause.
    b. Date.
    c. Events.
    d. Results.

B. Labor.
  1. Strikes.
    a. New York.
    b. Northwest.
    c. Chicago.
      1. Events.
      2. Result.
  2. Knights of Labor.
  3. Black List.
  4. Boycott.
  5. American Federation.
    a. When organized.
    b. Where.
    c. Influence.
      1. How shown.

C. Disasters.
  1. Earthquakes.
    a. Date, Place, Extent of destruction.
  2. Tornadoes.
    b. Date, Place, Extent of destruction.
  3. Blizzards.
    c. Date, Place, Extent of destruction.

2. Legislation.
    a. Presidential Succession law.
      1. Date, Provisions.
    b. Electoral Court Act.
      1. Cause.
      2. Date.
      3. Provisions.

c. Interstate Commerce Act.
    1. Cause.
    2. Date.
    3. Provisions.
d. Anti-Contract Labor Law .
e. Mill's Tariff Bill.
    2. Provisions.
    3. Fate.
    3. Provisions.
f. Dep't. of labor.
    1. When created.
    2. Duties.

3. Finances.
    a. Surplus.
    b. Proposed reduction.
4. Statue of Liberty.
    a. Whose work.
    b. Brief description.
    c. How did U. S. get possession
    d. Unveiling.
    e. Nickname.
5. Presidential Campaign.
    a. Parties in field.
    b. Issue.
    c. Candidates.
    d. Result.

References: Any American school history.

Harrison's Administration.

A. Biography.
    1. Sketch of life.
    2. Politics.
    3. Opponents.
    4. Term of office.
    5. Vice President.
B. Chief Events.
    1. Troubles.
        a. Sioux Indians.
            1. Leader.
            2. Events.
            3. Result.
        b. Labor.
            1. Homestead Strike and Riot.
            2. Trust agitation.

c. Disasters.
   1. Johnstown Flood.
      a. Cause.
      b. Date.
      c. Events.
   2. Naval disaster at Samoa.

2. Legislation.
   a. McKinley's Tariff Act.
      1. Date.
      2. Provisions.
   b. Sherman Act.
      1. Date.
      2. Provisions.
   c. Ballot Reform.
   d. Chinese Exclusions Act.
   e. International Copyright Law.
   f. Dep't. of Agriculture.
      1. When created.
      2. Duties.

3. Farmers' Alliance.
   a. Cause.
   b. Date.
   c. Strength.
      (1) Plan for Congressional Legislation.
      (2) Sub-treasury Plan.
      (3) Land Mortgage Plan.
      (4) Rise of People's Party.

4. Opening of Oklahoma.

5. Centennial.
   a. Washington.
      1. When, Why, Events.
   b. Patent office.
      1. Number of patents.
      2. First patents.

6. Pan American Congress.
   a. Date.
   b. Representatives.
   c. Place of meeting.
   d. Object.

7. Woman's Suffrage.
   a. First state to grant it.
   b. Others that followed.

8. Building new navy.
    a. Number of ships.
    b. Name them.
9. Six new states.
    a. Name them.
    b. Dates of admission.
10. Presidential Election.
    a. Parties in the field.
    b. Issue.
    c. Candidates.
    d. Result.

References: Magazine Articles—Any U. S. School History, Wilson's History of the United States.

Cleveland's Second Term.

A. Term of Office.
B. Vice President.
C. Chief Events.
    1. Exhibition.
        a. World's Columbian Exhibition.
            1. Place.
            2. Date.
            3. Cost.
            4. Attendance.
        b. Labor troubles.
            1. Strikes.
                a. Where.
                b. Causes.
                c. Result.
            2. Coxey's Army.
                a. Attempts.
                b. Results.
            3. Legislation.
                a. Extra session of congress.
                1. Cause.
                2. Repeal of Purchase clause of Sherman Act.
        b. Gorman-Wilson Act.
        c. Repeal of Force Bill.
        d. General Arbitration Treaty.
            1. By whom signed.
            2. Purpose.
            3. Date.
        e. Settlement of Behring Dispute.

4. Venezuela Boundary.
   a. Dispute.
   b. Outlook.
   c. President's action.
   d. Result.
5. Finance.
   a. Panic of 1893.
      1. Cause.
      2. Duration.
      3. End.
6. Establishing the Republic of Hawaii.
   a. How modelled.
   b. How recognized by President.
   c. Duration.
   d. Annexation.
7. New State.
   a. Name.
   b. Date of admission.
8. Presidential Campaign.
   a. Parties in the field.
   b. Issue.
   c. Candidates.
   d. Result.

References: See Harrison's administration.

McKinley, William (born in Niles, O., 1843; died of an assassin's wound in Buffalo, N. Y., 1901), twenty-fifth President of the United States. He reached the rank of major in the Civil War; was attorney of Stark County, Ohio, 1869-1871; Republican Member of Congress from Ohio, 1877-1891; chairman of the platform committee in Republican National conventions of 1884 and 1888; chairman of the Committee on Ways and Means in Congress, 1889-1891; Governor of Ohio, 1891 and 1893; elected President 1896 and re-elected 1900. The notable events of his administration were the passage of a protective tariff bill, the war with Spain to free Cuba, and the annexation of the Hawaiian Islands. He was shot at the Pan-American Exposition, September 6th, and died on the 14th; his order to Dewey; delays hostilities with Spain; calls for volunteers; orders fleet to sail; his order to Sampson; his action concerning Hawaii.

References: Biography by Robert P. Porter; King, Our Conquests in the Pacific; Whitney, Hawaiian America; Universal Cyclopaedia, article on "William McKinley." Consult also McKinley's speeches, compiled by Joseph Smith.

War with Spain, (a) The Maine blown up, (b) Battle of Manila, (c) Blockade of Cuban Harbor, (d) Spanish fleet destroyed, (e) Peace

Treaty. (a) Cuba given freedom, (b) The Phillipines, Guam and Porto Rico ceded to the United States, (c) The United States paid Spain $20,000,000, (d) The United States established a new national policy. (1) As to trade, (2) As to humanity, (3) As to protecting American soil, (4) As to expansion of territory, (5) As to educating illiterate colonies, (6) As to world politics, (7) As to our Army and Navy.

Prominent Men of War—Dewey, Manila; Hobson, Santiago; Sampson, Santiago; Shafter, Santiago; Roosevelt, Juan Hill and El Caney with the Rough Riders, and Schley, Santiago Harbor.

References: McMaster's, Hart's, Mace's, Gordy's, McLaughlin and Van Tyne's, and James and Sanford's American Histories.

Roosevelt's Administration.

A. Date.
B. Vice President.
C. Facts of his life.
D. His reforms.
   1. Civil Service.
   2. Conservation of National Resources.
   3. Governmental regulations of public utilities.
   4. Governmental investigation of vast combinations and corporations.
   5. Honesty in public life.
E. The Panama Canal.
F. Alaskan boundary and gold mines.
G. Prominent factor in settling war between Russia and Japan.
H. Exposition at Seattle.
I. Centennial Fair at Portland.
J. Jamestown exposition.
K. Exposition at Seattle.
L. Intervention in Cuba.
M. Settlement of Coal Strike in Penn.
N. Interstate commerce commissions authority increased.
O. Naval trip around the world.

References: Current Magazine Articles.

Taft's Administration.

A. Date.
B. Vice President.
C. Payne-Aldrich Tariff Bill.
D. Facts of his life.
E. Dissolution of Great Trusts.
   1. Standard Oil.

2. Sugar.
3. Tobacco.
4. Meat Packers.

F. Conservation of Natural resources continues to be great problem.

G. Trouble between labor and capital as to the employment of non-union men.

H. Russian treaty.

I. Proposed Reciprocity with Canada.

J. Threatened trouble with Mexico.

K. Current Events.

References: Current magazines and daily papers.

Territorial Expansion.

I. Introduction.
1. What we mean by territories.
2. The original U. S. Boundaries.
3. Territorial Government.
4. Ordinance of 1787. First territorial government of Ohio. Drawn up by Congress of Confederation.
   b. Purpose.
   c. Date 1787.
   d. Provisions.
      1. Property rights protected.
      2. A governor, secretary, and three judges.
      3. Duties of the officers.
      4. Later provision for a legislature.
      5. Rights guaranteed to residents of the territory.
         a. Religious liberty.
         b. Trial by jury.
         c. Provisions for schools.
         d. Slavery prohibited.
         e. States to be formed.
   e. Gen. St. Clair first governor.

II. Lousiana.
1. Review settlement by France.
2. Ceded to Spain 1763. Why?
3. Receded to France 1800. Why?
4. Purchase by United States.
   a. Date, 1803.
   b. Causes and reasons for purchase.
   c. Price paid.
   d. Boundaries.
   e. Results and importance.

f. Explored by Lewis, Clark, and Pike.
g. National resources and climate.

III. Florida.
1. Review explorations and settlements by the Spaniards—St. Augustine.
2. West and East Florida. West Florida claimed by the French.
3. Ceded by Spain to England, 1763, Why?
4. Ceded by England to Spain, 1783, Why?
5. Dispute between United States and Spain over West Florida.
6. Purchase by United States.
   a. Date 1819.
   b. Reasons.
   c. Price.
   d. Boundaries.
   e. Results and importance.
   f. Natural resources and climate.

IV. Texas.
1. Review Spanish explorations and settlements.
2. Mexico gains independence from Spain. Texas included.
3. Americans settle in Texas. Reasons?
4. The Texan Resolution.
   a. Causes.
   b. Leaders.
      1. Sam Houston.
      2. David Crockett.
   c. Result—Independence of Texas.
5. Application for admission to the Union.
6. Attitude of United States.
   a. North.
   b. South.
7. Annexation of Texas. 1845.
8. Boundaries and importance.
9. Natural resources and climate.

V. Oregon.
1. Exploration of Drake.
2. Lewis and Clarke.
3. John Jacob Astor and the fur trade.
4. Marcus Whitman.
5. Joint occupation with England.
6. Treaty of 1846.
7. Boundaries of territory obtained by United States.
8. Natural resources and climate.

VI. California and South West.
1. Review settlements and explorations of Spaniards.
2. Later a part of Mexico.
3. Mexican War.
a. Causes.
b. Results—Annexation of California 1848.
4. Boundaries and Natural resources.
5. Discovery of Gold.
6. Admission of California as a State. 1850.

VII. Gadsden Purchase.
1. Former boundary at Gila River.
2. Cause—Southern Pacific railroad.
3. Purchase of territory. 1853.
4. Boundaries.

VIII. Alaska.
1. Settled and explored by Russians.
2. Reasons for purchase.
3. Date 1867.
4. Price.
5. Boundaries.
6. Natural resources and climate.

IX. Hawaii.
1. Early condition.
2. Revolt against Queen.
3. Policy of Pres. Cleveland.
4. Annexation 1898.
5. Location, size, population and resources.

X. The Philippines.
1. Discovered by Magellan.
2. Early condition of the Islands.
3. Objections to Spanish rule by natives.
4. Rebellions.
5. Spanish American War.
a. Dewey's Victory.
b. Islands obtained by United States 1898.
6. Revolt against United States.
a. Causes.
b. Leader—Aguinaldo.
c. Failure of revolt.
d. Pacification of Islands.
7. Location, climate, and natural resources.
8. Size, extent, and population.
9. Government.
10. Present conditions.

XI. Porto Rico, Howland, and Samoan Islands, Guam and Drake Islands. 1. In each case bring out (a) How acquired, (b) when, (c) present conditions.

XII. Draw sketch map of U. S. showing the above acquisitions of territory and present possession.

References: Spark's Territorial Expansion of United States, Hart's Essentials of American History, James and Sanford's American History, McLaughlin's History of American Nation, Ashley's American Government, Roosevelt's Winning of the West.

Political Parties, Politics and Civics.

I. History of Political Parties.
  A. Origin of parties to 1795.
    1. Patriotic and Tory parties in Revolution.
    2. In Constitutional Convention.
      a. Large State party.
      b. Small State party.
        1. Basis of each.
        2. Differences.
    3. During ratification of Constitution by States.
      a. Federalists.
      b. Anti-federalists.
        1. Principles of each.
        2. Men who were leaders of each party.
    4. In Washington's Administration.
      a. Broad Constructionists or Federalists.
        1. Principles.
        2. Leader—Hamilton.
      b. Strict Constructionists or Republicans.
        1. Principles.
        2. Leader—Jefferson.
      c. Origin of the names of the parties.
  B. The Federalist—Republican period—1795 to 1825.
    1. The Federalists control under Adams.
    2. Control passes to the Republicans.
    3. Leaders during the period.
      a. Federalists.
      b. Republicans.
    4. The End of the Federalist party.
  C. The Democratic—Whig period, 1825-1859.
    1. The Presidential Election of 1834.
    2. Opposition to J. Q. Adams by the followers of Jackson.

3. Formation of new parties.
   a. National Republican.
   b. Democratic.
   c. Principles.
   d. Leaders.
   e. The policy of Jackson.
4. The beginning of the Whigs.
   a. National Republican party becomes the Whig party.
   b. Whig principles.
   c. Clay as leader.
5. The Democrats.
   a. Democratic—Republican party becomes the Democratic party.
   b. Principles.
   c. Leaders.
6. The formation of the Liberty Party.
   a. Question of Slavery.
   b. Principles and purpose.
   c. Leaders.
7. The formation of the Free Soil party.
   a. Origin.
   b. Purpose.
   c. Principles
   d. Leaders.
8. The Know-Nothing Party.
   a, b, c, & d, (See 7 above).
9. End of the Whig Party.
   a. Reasons.
10. The Kansas-Nebraska Bill.
   a. How the bill affected the parties.

D. The Democratic—Republican Period.
1854 to present time.
1. Formation of the Republican party.
   a. Causes.
   b. Purposes.
   c. Principles.
   d. Leaders.
   e. Elements.
   1. Anti Slavery Whigs.
   2. Anti Slavery Democrats.
   3. Anti Slavery Know-nothings.
   4. Free Soil Party
2. Election of 1860 and Democratic Split.
3. Republican party during the War.

4. Republican party during Reconstruction.
5. The National Greenback party.
   (See C 7 above).
6. The Prohibition Party .
   (See C 7 above).
7. The Populist Party.
   (See C 7 above).
8. The Socialist Party.
   (See II C below).

II. Political Conditions at present time.
- A. The Republican Party.
  1. Elements or "factions."
     - a. The Conservative Element.
       1. Principles.
       2. Leaders.
     - b. The Progressive Element.
       1. Principles.
       2. Leaders.
  2. General attitude of the party and present conditions.
- B. The Democratic Party.
  (See A 1 and 2 above).
- C. The Socialist Party.
  1. History and growth.
  2. Principles.
  3. Leaders.
  4. Recent successes.
- D. The Prohibition Party.
  (See II C 1, 2, & 3 above).
- E. Minor Parties at present.
  1. Names.
  2. Principles.
  3. Leaders.

III. Civil Government.
- A. The National or Federal Government.
  1. President and Cabinet—Executive.
     - a. The executive power.
     - b. Election.
     - c. Time of office and Salary.
     - d. Duties.
     - e. Cabinet officers.
       1. Names.
       2. Time and salary.
       3. Duties of each.

2. Congress—Legislative.
   a. Name of two houses.
   b. Manner of choosing.
   c. Term and Salary.
   d. Duties of Members.
   e. Procedure in passage of a bill.
   f. When Congress meets.
   g. Officers of each house.
3. Courts—Judical.
   a. Grades of courts.
   b. How chosen.
   c. Term and Salaries.
   d. How courts are conducted.

B. State Government of Ohio.
1. Governor and State officers—Executive.
   a. How chosen.
   b. Terms and Salary.
   c. Duties of Governor.
   d. Duties of other state officers.
2. General Assembly—Legislative.
   (See A 2 above).
3. Courts—Judicial.
   (See A 3 above.)

C. Local Government.
1. County.
   a. Names of county officers.
   b. How chosen.
   c. Terms and Salary.
   d. Duties of each.
2. Township.
   (See C. 1 above.)
3. City or town.
   (See C. 1 above.)

D. General Questions.
1. How taxes are levied and collected.
2. How trials are conducted in courts.
3. How relations are carried on with foreign countries.
4. The school system of Ohio.
5. Public Prisons, Asylums and Charities.
6. The National Army and State Militia.
7. The National Navy.
8. Recent political questions and issues.

References:

For pupils:—

Peterman's, Civics.
Boynton, School Civics.
Forman, Civil Government.

For teachers:—

Ashley, American Federal State.
Ashley, American Government, (Revised).
Hart, Actual Government.
Wilson, The State.
Bryce, American Commonwealth.
Siebert, Government of Ohio.

Industrial Development.

A. Trusts and corporations started in last part of 19th Century.
   1. Cheapened cost of production.
   2. Enlarged the scale of buying and selling.
   3. Induced labor to organize.
   4. Made the problems of labor and capital more complex.
   5. Necessitated laws governing corporate wealth.
   6. Made possible the accumulation of greater wealth than ever before in the history of the world.
   7. Aided the development of the country.

B. Railroads and Electric Roads.
   1. Number of miles.
   2. Cost of shipping and transporting.
   3. Interstate Commerce Commission.
      a. How organized.
      b. Number of men.
      c. Duties and powers.
      d. Purpose.
      e. Work accomplished.
   4. Express companies.
   5. Telegraph lines.

C. Telephones.

D. Improvement of Waterways and Canals.

E. Public Highways.

F. Panama Canal.

G. Improved machinery for farm, factory, locomotion, and office.

H. Cities.
   1. Rapid Growth.
      a. Cause.
      b. Present condition.

c. Government.
1. Advantages.
2. Defects.

2. Sanitary Conditions.
a. Tenement houses.
b. Streets and alleys.
c. Parks and playgrounds.
d. Health department.

3. Efforts to Control Vice.
a. Industrial schools.
b. Juvenile courts.
c. Homes of redemption.
d. Efforts through public schools.
e. Y. M. C. A.
g. Police department.

I. Rural Communities.
1. Efforts to build up fertility of soil.
a. Agricultural colleges.
1. Where.
2. How maintained.
b. Experiment stations.
1. Where.
2. How maintained.
3. Purpose.
4. Accomplishments.
c. Agricultural education in public schools.
d. Agriculture department at Washington.
e. Improved methods of farming.

J. Reclamation of Arid West.
1. Irrigation.
2. Dry Farming.
3. Government Laws, etc.
4. See acquisition of territory.
5. Giving away of government lands to people who will prove them.
a. How prove a claim.
b. Cost of land proving.
c. Territory last opened.
6. States admitted since the Constitution was adopted.

K. Development of mineral products. Coal, Gold, Silver, Petroleum, Lead, Copper, etc.
1. Different uses of each.
2. Where found principally.
3. Where manufactured.

L. Education.
   1. Universities and colleges.
   2. Normal schools.
   3. Private schools.
   4. Public school system.

References: The Challenge of the City—Strong, Congressional Records, Bulletins of the Department of Agriculture of the States and Nation, Bulletins of the Department of Education of the States and Nation, The Rise of the West—Turner Vol. XIV., National Development—Sparks, Expansion of American People—Sparks, The Winning of the West—Roosevelt, America as a World Power—Latane, When America was New—Jenks, The Making of the Ohio Valley States—Earle, The Community and the Citizen—Dunn.

ARITHMETIC.

INTRODUCTORY.

By S. L. Turnipseed, *New Richmond, Ohio.*

The purpose of the work in the elementary grades is to teach the fundamental facts of numbers that the pupil may be able to use the tools of mathematics skillfully: to give ability to apply knowledge of essential processes to the solution of simple, practical problems: to afford a working knowledge of a few of the simple and more fundamental elements of arithmetic, algebra and geometry.

The "essential processes" may be classified as follows:

		Arabic
1.	Writing numbers	Integers Roman (to C). Common Fractions. Decimal Fractions.
2.	Addition Subtraction Multiplication and Division of	Integers. Common Fractions. Decimal Fractions.
3.	Denominate numbers with tables of	Length Surface Cubical Contents Dry Measure Liquid Measure Avoirdupois Weight Time Measure Paper Measure Counting U. S. Money.

4. Finding perimeter, surface and contents of familiar plane figures, and solids.
5. Use of the Common Aliquot parts.
6. Simple percentage.
7. Simple interest.

Proficiency in the use of these processes is necessary not only because business life requires it but also because they furnish a satisfactory basis for mathematics in the advanced grades.

GRADE I.

1. No formal work in arithmetic in this grade.
2. Counting, comparing, measuring.
3. Combinations through ten.
4. Counting by ones and twos to one hundred.
5. Roman notations to XX.
6. Reading of figures to enable pupils to find the page in their reading book.
7. The child's number interest should be utilized. A few minutes daily should be used in relating this work to the other work of the first year.

GRADE II.

1. Some good primary book in the hands of the teacher.
2. The work should be oral and limited to addition and subtraction.
3. Teach the addition and subtraction tables. The multiplication table to 5's stopping at 10.
4. Count by 2's, 5's and 10's to 100.
5. Drill much on the forty two addition combinations. (see below.)
6. Teach the addition of two numbers and the subtraction of two numbers in which each order is not greater than 9.
7. Reading and writing numbers to 1000.
8. Measures used—inch, square inch, pint, quart, gallon to be used in a practical way.
9. Problems in all operations should relate to life.
10. Review first year's work.

The following combinations should be memorized and drilled upon until the pupil can give the answer instantly.

2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	5
2	3	4	5	6	7	8	9	3	4	5	6	7	8	9	4	5	6	7	8	9	5

5	5	5	5	6	6	6	6	7	7	7	8	8	9
6	7	8	9	6	7	8	9	7	8	9	8	9	9

GRADE III.

Review first and second year work. Teach and drill thoroughly the multiplication table completed to the 8's. Associate the following facts, $5\times6=30$ $6\times5=30$ $\frac{1}{5}$ of $30=6$ $\frac{1}{6}$ of $30=5$ $30\div5=6$ $30\div6=5$ 6 5s is how many 6s, 3 7s is how many 7s, and so on, taking each number up to eight through the series.

There is a tendency in this grade to compare, to handle and to express what has been discovered—it will be well to foster this tendency by supplying material for such work as follows:

Draw lines representing 2in, 4in, 6in, 8in, and 1 foot.

Make statements like the following:

The sum of two in. and four in. equals six in. How many 6 in. in a foot? How many 4in.? 6in. is what part of a foot? 4in. equals what part of a foot? What equals $\frac{1}{2}$ foot? $\frac{1}{3}$ foot? $\frac{1}{6}$ foot? etc.

If a 4 inch ruler cost 10c what will a foot ruler cost?

John broke $^2/_3$ of his ruler which was a foot long. How many inches did he break off?

In the same manner use ratios of time—mo. and yr. Ratios of length-foot and yard. Ratios of volume-pint, quart and gallon.

Review all combinations used in the second grade.

Constant intelligent drill is the chief means of securing the desired results. The work of this third grade is to get started well in the study of addition and subtraction, using easy problems drawn partly from natural situations in life and partly from set lists, designed to impress the particular lesson in hand. Always work for accuracy and rapidity. Rapid answers to the following type problems should be secured by the end of the third year.

Addition.

4	3	4	8	9
4	1	2	4	3
3	5	3	3	4
2	2	2	1	6

Subtraction.

672	630	842
289	478	496

When the child is able to solve any problem of one step in addition and in subtraction, two step problems may be introduced. The one step problems should be drawn from the experiences of the pupils, as what is the cost of 2 pencils at 3c a piece?

How many desks in a school room if there are 5 rows and 6 desks in a row?

Keep in mind the difference between a one step and a two step problem in addition, in multiplication, in subtraction, etc.

Remember the first essential in the solution of a problem in any grade is to understand thoroughly the meaning of the example. Exercises in making and drawing measurements should be given. Buy common articles and compute the cost. Teach the divisions of the dial, and halves, thirds, fourths of 60. Table of time measure.

A suitable book for the third grade should be in the hands of the pupils.

GRADE IV.

The most important work in arithmetic in grade IV is the thorough drill in the four fundamental processes with whole numbers. Accuracy and reasonable rapidity should be secured in this grade. At the end of this year the pupil should be fairly proficient in multiplication, division, addition and subtractions, operations with simple fractions. *Constant review is vital,* and especially drill upon the tables. Thorough memorizing the mutiplication table.

Roman notation completed.

Simple operation in fractions involving the following fractions: $\frac{1}{2}$ $\frac{1}{3}$ $\frac{2}{3}$ $\frac{1}{4}$ $\frac{3}{4}$ $\frac{1}{5}$ $\frac{2}{5}$ $\frac{3}{5}$ $\frac{4}{5}$ $\frac{1}{6}$ etc. Give many examples based upon paper cutting as follows: $\frac{1}{5}$ and $\frac{4}{5}$ $\frac{1}{2}$ and $\frac{1}{6}$ $\frac{1}{3}$ and $\frac{1}{6}$ $\frac{1}{3}$ and $\frac{5}{6}$ etc.

Use similar problems in subtraction. Let the pupils check or prove his work by means of paper folding or other objects. Be sure he images the entire process. Mental problems requiring analysis should be given in both abstract and concrete problems using about one third of the time for that work.

Addition and Subtraction.

Require pupils to check their addition by adding reverse columns, similarly subtraction should be checked by the reverse process of addition. Thus 17—9=8 is checked by the process 9 and 8=17. Drill on addition and subtraction combinations. When the year's work is completed the pupils should be able to subtract rapidly examples like the following:

Subtraction.

5306	9270
—3768	—5793

Addition

768
443
252
324

Drill on recognition at sight such problems as follows:

$$\begin{array}{cccc} 37 & 26 & 83 & 62 \\ 25 & 22 & 28 & 27 \text{ etc.} \\ \hline \end{array}$$

All answers not perfect should be rejected. Races to see who can do the problems most rapidly should be instituted.

Multiplication.

In multiplication use multipliers not to exceed three figures. Introduce zero into the multiplier often. Have the pupil check his work. See that every pupil masters the multiplication to the 12s.

Rapid drill work in problems as follows:

$$\begin{array}{ccc} 867 & 962 & 435 \\ 7 & 8 & 9 \\ \hline \end{array}$$

Division.

Pupils should be shown the possible positions of the quotient.

$$\begin{array}{r|l} 3 & 1626 \\ \hline & 542 \end{array} \qquad \begin{array}{r|l} & 542 \\ \hline 3 & 1626 \end{array} \qquad 3\,)\,1626\,(\,542$$

Teach long division by beginning with smaller numbers first, not using any number of more than two figures as:
3, 5, 7, 9, 11, 12, 21, 31, 41, 51, etc. Require pupils to check long division by reversing the process.

Oral problems involving thought should be given, always relating them to community interests as: the area of a school room after measuring it: school lot; walk, etc.

Table for U. S. money should be learned and applied in mental problems.

Teach the use of common units in measuring, as, sq. in. sq. ft. sy. yd., etc. Also table for linear measure, square measure, U. S. currency.

The aliquot parts, $^1/_2$, $^1/_3$, $^1/_4$, $^1/_5$, $^1/_{10}$ as applied to 100 should be taught. Factoring of simple numbers should be presented. Bear in mind all the time that the main emphasis in this grade is to give skill and accuracy in the abstract process in the fundamental operations.

GRADE V.

Work in the 5th grade continues along the same lines as in the fourth year, only more intensely. Ratio and percentage is introduced. The text book is used more widely, supplemented with many outside problems relating to the community.

Problems should now involve any one or all of the fundamental process so that the pupil may learn to select the required process and thus be trained in when to add, when to subtract, to multiply or to divide. Review essential processes and work of previous grades: Rapid drills in addition, subtraction, multiplication and division to such an extent that it will never again be necessary to introduce such drills regularly. Give enough problems to secure and insure accuracy and speed.

Factoring and Least Common Multiple are excellent drills. Resolve into and memorize all the prime factors of numbers from 1 to 100. Distinguish clearly the difference between prime and composite numbers.

Fractions.

Addition, subtraction, multiplication and division of fractions. Give much drill in reduction of mixed numbers to improper fractions and the reverse. Teach relations of quantity: e. g.

What is the relation of 3 to 9? Ans. $^3/_9$ or $^1/_9$ of 3 or $^1/_3$.

Introduce cancellation. If twelve tablets cost 36 cents what will 9 cost?

$$\text{Solved } \frac{36\times 9}{12}=27\text{c.}$$

Introduce analysis: e. g. If $^2/_3$ of a load of coal cost \$8, what will $^1/_3$ of a load cost? 1 ton? $3\text{-}^1/_2$ tons? $^1/_3$ load cost $^1/_2$ of 8 which is \$4; one load cost 3×4 which is \$12. $3\text{-}^1/_2$ loads cost $3\text{-}^1/_2\times 12=\$42$.

Pupils should see objectively that fractions representing equal sized parts or that have the same name may be added, subtracted or divided, and comparing fractions with same denominator, frequently calling for original problems. Also fractions with unlike denominators until the principle is thoroughly established.

Mixed Numbers. Proper and Improper Fractions.

Pupils should first read a mixed number as $3\text{-}^7/_8$ as 3 whole and $^7/_8$ of a whole. Reduce integers and mixed numbers to fractions. Reduction of improper fractions to integers or mixed numbers.

The business world seldom uses fractions whose denominators are higher than 16, preferring to use decimals for all such fractions. Finding least common denominator by inspection should be taught.

Multiplication of Fraction developed objectively, by means of paper folding or by drawings.

Have pupils to draw a rectangle 3in. by 2in. and divide it into inch squares. Ask how many squares in ½ of the whole.

$^1/_2$ of 6?	$^1/_3$ of 6?	$^2/_3$ of whole
$^1/_3$ of 6?	$^1/_6$ of whole	$^5/_6$ of whole
$^5/_6$ of 6?	$^1/_2$ of $^1/_2$	etc. etc.

Abundant practice in solving problems in this process should be given. Cancellation should be taught, giving sufficient practice to make pupils skillful in this work as well as in the multiplication and division of fractions. Give examples as: Divide product of $18 \times 32 \times 50$ by product of 15×16. After a little experience with cancellation, pupils will be able to solve many such problems mentally. Cultivate the habit of "short cuts" in multiplication and division.

Give many two step and three problems in concrete work and have pupils solve by cancellation, as, If 22 calves cost $210 find the value of 33 calves.

$$\frac{210 \times 33}{22} = \$315$$

Review compound numbers and teach reduction especial attention given to linear, square, liquid, dry measure, avoirdupois weight and U. S. currency. Always give practical problems.

Get it clearly to the pupils that a fraction may be written a variety of ways as: seven hundreths, 7 hundreths, $^7/_{100}$, .07. The last is the decimal form because it is used only to express fractions whose denominator is ten or a multiple of ten. Drill in reading and writing decimals until the pupil will automatically associate one decimal place with the name tenths, two places wth hundreths, three with thousandths, etc.

Formal work in decimals may be deferred until the sixth grade, particularly intense work in the multiplication of decimals. The subject of decimals may be introduced by means of Federal money. Give such problems in addition, subtraction, multiplication and division of decimals that can be worked mentally as tenths and hundredths of a dollar.

Mental Arithmetic.

Mental or oral arithmetic should be given daily, about one third of the time. Should include both concrete and abstract problems.

The chief aim of mental arithmetic is to give sufficient drill on essential processes and principles that have been presented to the class that they may become skillful and sure in their use of the principles taught.

GRADE VI.

The teacher's effort should be directed particularly to work calculated to strengthen judgment, to encourage independence and to confer the feeling of arithmetical power actually possessed. The feeling of joy arising from achievement here arises to a veritable craving. At the outset of this year a review of the essential processes should be made emphasizing the decimal processes. The pupils should have a complete understanding of the fundamental operations, Compound numbers, common and decimal fractions, measurements, Bills and receipts. The process of finding percentage and rate should be presented. Explanation

of the purpose and nature of interest should be given. Problems for the finding of interest and rate. Intensify the work in the multiplication of decimals. Begin by teaching how to multiply a common fraction by an integer as:

$4 \times {}^{2}/_{10} = {}^{8}/_{10}$ then $4 \times .2 = .8$

Then use hundreths as $4 \times {}^{200}/_{100} = {}^{800}/_{100}$

Then give practice in multiplication multiplying a decimal by a decimal and finally give the rule—there is no objection to learning the rule for multiplication by the rate method.

Give the pupils a wide experience in changing decimals to percents and percents to decimals using integral numbers of hundreths.

The idea of percent should always be associated with hundreths. Use the decimal fraction always in finding percent. Keep the work in percent simple, using only numbers of percents as 4%, 8%, 12% but not $4\text{-}^{1}/_{2}\%$, $8\text{-}^{1}/_{2}\%$ etc. Teach percent as a phase of multiplication of decimals.

Denominate Numbers and Measurements.

Have pupils to memorize thoroughly the following tables: time, weight, dry measure, liquid measure, linear measure, square measure and liquid measure.

Teach this subject objectively to make the units concrete as in measuring, lay off in the room or school yard, a yard, square yard, rod, sq. rod, etc. Have pupils to estimate lengths, areas, weights, and verify by actual measurements. Reduction from higher to lower denominations and from higher.

Give wide experience in reduction in the processes of addition and subtraction, with less difficult work in division and multiplication of compound numbers. Take up the measurements of right angled triangles in this grade. Surface and volume of pyramid, a right prism, and draw the figures.

Papering, Plastering, Roofing, etc.

Problems should be practical as:

A farmer feeds his team 4 gallons of oats, how many quarts does he feed at a meal?

A bought a farm 80 rods wide by 160 rods long. How many acres?

He planted one field 40 by 80 rods in corn. It cost $1.25 an acre to plow it and 30c per acre to cultivate, and 25c per acre to plant it. Find cost of plowing. Of planting and of cultivating if it was cultivated 4 times.

A farmer kept 10 cows, they average 12 quarts of milk per day for 9 months and 16 quarts for 3 months in the year, how much does he clear in the 12 months if it takes an average of twelve tons of feed to feed each cow and feed is worth $20.00 per ton, and he feeds 20 lbs. per day. Milk selling for 3 cts. per quart.

Make up different problems involving farm interests found in different books, on Agriculture. Study a good list of miscellaneous problems involving denominate numbers. Consult patrons of the district and make up problems on leading lines of farm business as a year in poultry raising, wheat raising, potatoes, onions, tobacco, etc. It is an excellent plan to have pupils to prepare such problems.

Common Fractions.

Addition and Subtraction of Fractions.

Have pupils understand the fact and know how to perform the operation that fractions must have a common denominator before they can be added.

Form of addition:

add $6\text{-}^7/_8$, $9\text{-}^3/_7$, $11\text{-}^5/_6$

L. C. M. of denominators is 24.

$$\begin{array}{ll} 6\text{-}^7/_8 & 21\times7=147 \\ 9\text{-}^3/_7 & 24\times3=\ 72 \\ 11\text{-}^5/_6 & 28\times5=140 \\ \hline 27\text{-}^{91}/_{168} & \qquad 259 \quad 91 \\ & \qquad \overline{168}=\overline{168} \end{array}$$

Subtraction may be taught by using similar form—Allow no more written work to appear than is in the form. Drill on many problems in both addition and subtraction.

Teach a single rule for the whole subject of multiplication, reduce all integers and mixed numbers to a fraction and multiply numerators together for a new numerator and denominators for a new denominator, using cancellation when possible and change result to simplest form.

In teaching division of fractions, use same rule after inverting the divisor. Special attention should be given to the following *type* of problems since they appear all through the upper grades.

1. To find $^5/_9$ of 45. (By Analysis).
2. To find what part 7 is of 12. To find what part $3\frac{1}{3}$ is of $\frac{4}{5}$.
3. To find the number if $^3/_7$ of it is 21.

Drill on these types.

Simple bills, accounts and receipts.

Have pupils make out accounts for a month's expenses on the form. Bills of expenses receipted. Make the work practical and frequent. Teach definition of simple terms under this subject.

Mental Arithmetic.

After a subject has been taught a large number of simple problems should be given in mental arithmetic, so that the pupil may become

sure and skillful in the application of the principle. About one third of the recitation period should be given daily in mental arithmetic. The work should be rapid and practical.

GRADE VII.

The chief purpose of arithmetic in the seventh and eighth grades is to improve and extend the work begun in the grades below.

Devote the first two or three weeks to drill upon the work of fractions and decimals and fundamental processes. A good foundation in these essentials is necessary to secure best results in the advance work.

Finish the subject of simple interest and extend the subject of percentage to commercial discount, bank discount, (simple) commission, taxes and insurance and simple problems in stocks and bonds. Make all work practical. Teach "standard time" to illustrate the arrangement for fixing the time in different parts of the country. Do this by constructing a "standard time" map, and develop the subject by practical questions as: What changes must I make in my watch in traveling eastward? Westward? Where shall it be changed? What time is it in St. Louis? Denver? etc.

Intensify the work in denominate numbers. Introduce measurement of surfaces and volumes. Extend the work to include areas of circles, volumes of cylinders, supplemented with *many* concrete, practical problems.

In interest either of the following forms is good.—

Find interest on 120 for 3 yr. 7 mo. 15 da. at 5%.

$(11 3 yr. 7 mo. 15 da.=1305.

$$\frac{120 \times 1305 \times 5}{360 \times 100} \quad \frac{87}{4}=21.75$$

120
5
———
600 int. for 1 year.
3
———
18. int. for 3 yr.
3. int. for 6 mo.
.50 int. for 1 mo.
.25 int. for 15 da.
———
21.75 int. for 3 yr. 7. mo. 15. da.

Be sure the pupils are accurate in their work in interest. Drill with many oral and written problems.

Finish the subject of common and decimal fractions, giving thorough drill on principles and rules with many applied problems. Review tables of denominate numbers, and introduce new material in measurement of surfaces and volume. Extend the subjects to areas of circles and volume of cylinders. Make a broad application of concrete problems, finding diameter, radius, circumference and area of circles.

Have the pupils measure various magnitudes and determine contents. Illustrate freely.

Teach lumber measure, have pupils make out in regular form for some simple building and find its cost at a given price. Give many examples and drill for mental work as far as practicable.

In many instances seventh and eighth grade work may be used at the same time.

GRADE VIII.

The first part of this year should be used to review percentage, especially interest, insurance, profit and loss, (bank discount and trade discount). Simple problems in stocks and bonds, greatest common divisor, least common multiple, and simple proportion. Special drills in rapid addition of integers and writing, multiplying, and dividing of decimals.

In stocks and bonds explain clearly the relation of rate of interest to rate of dividend. Teach ratio and proportion intensely. Teach the various applications of percentage thoroughly. Drill on the form of commercial paper in common use, such as bills, notes, checks, drafts, etc.

In measuration give practical problems in finding the area of surfaces as rectangles, triangles, circles. Illustrate volumes of rectangular solids, cylinders, pyramids, cones and spheres.

Pupils should be encouraged to construct practical problems in plastering, papering, carpeting, stone-work, etc.

Develop the process of finding square root. Insist upon memorizing the rules for the steps in this subject.

Have pupils in this grade to become familiar with some of the more common units that they may use them automatically, as:

62½ lbs. or 1000 oz.=weight of a cubic foot of water.

231 cubic inches=one gallon.

2150.4 cu. ft.=1 bu.

24¾ cu. ft.=1 perch.

640 A.=1 sq. mi.

36 sq. mi.=area of one township.

The pupils should be familiar with the simple terms of the metric system and its relation to the English tables.

A general review, giving special attention to principles and reason involved, cultivate a pride in quick and accurate work in all that you do.

Carry mental arithmetic along with the written work requiring the pupils to give quick and accurate analysis of problems.

GEOGRAPHY.

By D. H. Barnes,
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First Year.

Observational work commenced and used as material for the Language class. Geographical stories told or read to the children, leading them to know the little people of other countries. Short class excursions may prove beneficial. Geography is the one elementary branch that looks out to nature, and its study must begin with the observation of nature, first as bounded by the horizon line that shuts in the child's little world of home — nature as presented to the eye; and then as it may be pictured by the imagination. Teach objectively the relative positions expressed by the terms *over* and *under, above* and *below, in, on* or *upon.* This may be done by placing objects in these relations and asking questions. This should come toward the latter part of the year. Next teach the terms *right, left, front, back.* Have pupils step two steps to the right; two to the left, etc. Hold up the right hand, the left hand, etc. One pupil stand in front of the chair; another, back of the chair, etc. Have pupils name a few objects in the school room to their right, to their left; in front of them, back of them. A pupil steps to a desk and points to its front edge, back edge, right-hand edge, left-hand edge. Continue this drill on various objects until pupils realize the use of these terms. Directions may be taught: sunrise and sunset; the color and seeming shape of the sky; proper geographical stories told in an attractive manner holds a higher place in the first year than any other line or phase of the work.

SECOND YEAR.

Review the first year's work.

Through the conversational exercises of the Language class, lead the pupils to observe things around them: Observation and conversation about the earth, sun, moon, weather; keeping a blackboard calendar with record of fair, cloudy, rain, snow, etc. The benefits derived from the sun, moon and stars (omitting the effort to teach astronomy). Names of the seasons. *Spring* — vegetation springs from the ground. Nature clothes herself with leaves and flowers; days grow longer and nights shorter. Names of the spring months.

Summer — the sun season; long days and short nights; haying and harvesting; names of the summer months.

Autumn, called *fall* — leaves, fruit, etc. fall to the ground. Teach pupils to observe and know what leaves and fruits in their vicinity fall during this season. The farmer gathers his corn, potatoes, apples, etc.; squirrels gather nuts for winter use; frost comes (what is frost?); change in color of leaves; beautiful foliage of trees.

Winter — the *wind* season; short days and long nights; snow keeps the earth warm (what is snow?); snow houses of the Esquimaux; Tell more interesting stories of the people living in the cold lands and have the children reproduce these stories in their own words, first orally and next in writing for their language work. Many countries have no snow. A great many people never saw ice. Read or tell stories of the people, etc., of hot countries. Lessons on fruits, seeds, the trees in autumn. Lessons on the domestic animals in point of usefulness to man and as pets; familiar wild animals; domestic birds and the common wild birds. Correlate geography and nature-work. The teacher should write on the board names of trees, flowers, etc., as they come up in conversation and teach the children to recognize the varieties. The general idea, plant, is to be made as clear as possible, and the main parts of every plant made known — root, stem, branches, leaves, flowers, fruit — but without dissection. For this purpose, study may be made of some common plant as geranium.

The cow furnishes a good subject for study; its products being so many and so familiar — flesh, milk, butter, cheese, tallow, horn, hair, hide, etc. Kindness to animals should be taught by precept and illustrative stories. Teach *position, direction, distance* and *surface.* Teach the cardinal and the semi-cardinal points and drill on same. Teach the direction of the blackboard from the table or teacher's desk; the table or teacher's desk from the blackboard; Pupils should point to the north side of the school room, south side, east end, west end. Pupils tell in what part of the room the teacher's desk is, the front door, the clock, stove, etc. Name some object north of the school house; east, west, south. Teach the direction between north and east; south and east, etc. Name and locate objects inside the schoolroom and then outside the schoolroom in accord with the semi-cardinal points. In what direction does the north wind blow? *From* what direction? An east wind? A south wind?

Distance: Compare objects of nearly equal length, and let pupils guess which is the longer. Draw a straight line upon the blackboard and let the pupils divide it equally. Then in three equal parts, etc. Then measure for accuracy. Have pupils mark on the blackboard what they consider an *inch,* a *foot,* a *yard,* etc., then measure for accuracy.

Teach what is meant by the terms length, width, or breadth, depth, thickness and height. Teach children to know what is meant by a rod, a mile. Locate objects by these distances.

Review direction and distance combined. Have pupils tell the direction and the distance of their home from the school; the school from the home.

Surface: The idea of smooth or rough surface, even or uneven surface. An even surface of ground near the school should be pointed out; also an uneven surface of ground. Lands adjacent to the school should be discussed in regard to surface. Roads also furnish examples

in this line. Explain the difference between level and sloping surfaces. Have pupils hold books in level position, then in sloping position. Water runs from sloping surfaces readily, and the greater the slope the more rapidly the water flows. Show too that a plane may be level or sloping.

By picture and by object teach what is meant by *hill*. Teach the meaning of foot or base, sides or slopes, top or summit as applied to hills. Have pupils locate some hills. From this teach the difference between hill and mountain.

Teach what is meant by a spring; a stream of water — rill, brook, creek, river, right bank, left bank. Tell why streams of water wind about; how and why they increase in size, etc. The value of streams of water. What are rapids? Falls. What is meant by source, course, and mouth of a stream? *Teach by illustration* and not by dry definitions.

THIRD YEAR.

Review Second Year's Work.

Continue reading and telling geographical stories. Dwell on home regions. Begin the development of maps of surfaces, and of home regions. Draw a diagram of the school room on a definite scale — say one inch to the yard — this can be done and understood more easily and readily than we at first may think. Locate objects in the room each to each then have pupils locate same on map each to each. Draw a diagram of the school-ground on a definite scale, say one inch or one-half inch to the rod. Pupils should be able to locate the position of the school-house, important trees, flower beds, pump, etc. each to each, then have pupils locate same on a map.

Selections in the reader should be used to emphasize geographical concepts — "The Shepherd Boy," "A Summer Day," "The Waves," "Mountains," "Great, Wide, Beautiful, Wonderful World."

Lessons on plant life appropriate to the season; for the fall — leaves, their parts — stem, blade, veins and veinlets and use: a collection of leaves made and studied that those of the different plants may be recognized. Use of leaves to the plant and to man.

For the spring — buds, how protected, how arranged; the first sign of spring awakening; catkins of the willow, and other flowers as they appear, noted with time of appearance on the blackboard, and children taught to know them. The use of flowers to produce seed. The great purpose of a plant is the production of seed — Beautiful flowers — a few may be learned. Encourage pupils to have "Home gardens."

Animals: Life of familiar animals — cow, dog, cat, hen, etc.

Illustrate and make clear, to the pupils (or lead pupils to find and name) what is meant by valleys, slope, divide, strait, bay, island, lake, pond; rain, what it is and where it comes from. Where does the water in the spring come from? What makes it bubble up? Where does the water all go? Won't the ocean fill up? An elementary study of the soil

would prove quite valuable. Tell the pupils about famous Rapids and something of interest about some famous falls, as Niagara Falls.

Draw a map of your township and locate important streams, towns, halls, hills, elevators, railroads.

Name the following that grow in your township (pupils should be taught to write the words correctly) — fruit trees, forest trees, berries, grains, vegetables, birds, tame-animals, wild animals. Develop the use of each. Any gravel-pits or stone-quarries in your township? Their use.

How do plants feed? How do plants grow? How improve plants?

A Few Questions.

1. What colors can you see in a rainbow?
2. Where is the sun at night?
3. When do we have longest days? Longest nights?
4. When are days and nights equal?
5. How often do we have a new moon? What are the uses of the moon?
6. On which side of an east and west wall will the snow melt first? Why?
7. Name an enemy of the potato, apple, wheat, grape, corn, tomato.
8. What kinds of cloth are made from plants?
9. What plants supply valuable oils?
10. Name six important medicinal plants.

Make a record of the rainy days, the cloudy days, and the sunny days of each month and compare. Correlate geography and Nature Work.

FOURTH YEAR.

Review the third year's work.

No Text Book.

Map making continued.

Draw a map of your county. On this map, locate the townships, the streams, railroads, towns, county-seat, and other things of prominence.

Into what river or lake does the drainage flow?

How does the water reach the Atlantic Ocean? Use large map.

What are the chief industries of your county (country and city)?

Character of the soil on the uplands? In the valleys? How test the soil to detect acid? Try the experiment.

Chief crops? Where marketed?

Any timber found? Kinds? Principal uses?

Name the articles manufactured in your county. What cereals are grown in your county? Their uses? Name the forage crops of your county. Name the root and tuber crops also. Any miscellaneous crops, if so, what?

Name the fruits, vegetables, grains, wild-animals, tame animals, birds, berries, fruit trees, forest trees, and detrimental insects found in your county.

Name the township officials; the county officials. Bound your township. Your county. Give several lessons on foods of the people in different countries.

Draw a map of Ohio. Locate its capital and six largest cities, important rivers, lake, reservoir, canal, railroad-trunk-lines. Chief industries of the people.

Treat Ohio somewhat similar to the way your county is outlined for this year's work. Name the counties bordering Lake Erie; those bordering the Ohio river; those touching Indiana. Bound your state. Give lessons on use of clocks; how to tell the time. Some drill will be required. Teach the number and names of the days of the week, and the months of the year.

Give a few lessons on the globe, teaching the earth's form, motion on its axis, the great oceans, continents, and islands.

A Few Questions.

1. Where does the water in brooks and rivers come from? Where does it go?
2. Why are some rivers rapid and others slow?
3. Why do creeks and rivers wind about?
4. What are dykes? Levees?
5. Why are dams built in rivers? Locate one.
6. Why is spring water so pure? Locate a spring.
7. What do plants feed upon?
8. What is the food of the squirrel, the rabbit, the quail?
9. Where does dew come from? When does it form? Does dew fall? Why does an ice-pitcher sweat?
10. What animals sleep during the winter?
11. What birds remain with us during the winter?
12. Name six important cabinet woods.
13. What is tar, turpentine, oakum, jute? Give the use of each.
14. Name four ornamental trees.
15. What is tapioca? How prepared?
16. Of what use is snow to plants.
17. What are dew and frost? Mist and sleet? Rain, snow ano hail?
18. Of what are the following made:—linen, calico, gingham, thread. silk, rope, twine, cloth, gloves, yarn, shoes.
19. What are weeds? Name ten.
20. Which house-plants need most sunlight.
21. Where do the following grow:—cranberries, rice, cotton?
22. Name three common plants that will grow from slips.

23. What harm is done by weeds?

24. What weed seeds are so light that they may be carried by the wind? What ones may be carried by beings coming in contact with them? What ones may be carried by streams of water? What ones may be carried by the birds?

25. How is Indian rubber obtained?

26. What articles are made from bark, sap, buds, leaves, blossoms, seeds, roots, osiers?

27. What animals are covered with fur?

28. What bird defends itself by kicking?

29. Of what use is the thermometer?

30. Name the grains and cereals used for food.

31. Name the fruits of autumn.

Continue the study of animals as in the third year — sheep, horse, mouse, robin, etc. Classify animals as (1.) land animals, water animals, air animals: (2.) four footed, two footed, animals with no feet, with many feet: (3) cloven footed, one toed, several toed: (4.) grass eaters, flesh eaters: (5) tearers, gnawers, waders, swimmers, flyers. Continue weather observations.

Correlate Geography with Language and Nature Work.

[NOTE:—In multigraded schools the oral geography classes of the first four years may be united into one class providing the work is suitably outlined by the teacher or superintendent in charge. By so doing the pupils of the lower grades will have the advantage and will have the work mastered by the time they are ready for the book in the Fifth year. We also advise the uniting of the *Fifth and Sixth* year grades for the completion of the *Elementary Geography*, and the uniting of the *Seventh and Eighth* years for the completion of the *Advanced Geography*. Thus making but three classes in Geography. Have the Fifth and Sixth years, and the Seventh and Eighth years go through the entire book each year. The Fifth and Seventh years may have a seemingly difficult time, but they will prove stronger in the Sixth and Eighth years for having this experience. Allowance must be made in the recitation and in the examination for the Fifth and Seventh years where combined with the Sixth and Eighth years, as suggested above.]

Where the grades are separate the work of the Fifth grade should include the elementary geography through the U. S. and its sub-divisions, thus leaving the foreign countries for the Sixth year.

The Seventh year grade should complete the work of the Advanced book from the beginning through and including the United States and its sub-divisions; taking the remainder of the book and a review of the entire book in the Eighth year.

[Much is said about completing the subject of geography by the end of the Seventh year — this does not meet with our approval, as books of

travel, etc., should accompany the study of the text, and to do this well, requires time.]

Much supplementary work should be given in the four upper grades. Books of travel should be read. Books on "How The World Is Clothed", "Fed," and "Housed" should be included. In the United States, group the wheat states, the corn states, the cotton states, the coal states, the iron states, the gold states, the silver states, the fruit states, the states producing vast quantities of lead, copper, horses, cattle sheep, hogs, tobacco, lumber, rice, potatoes.

A few questions and suggestions for *Seventh and Eighth year* grades:—

1. Trace water-routes from St. Petersburg to Odessa; from Constantinople to Yokohama; from Calcutta to Liverpool; from Duluth to Liverpool; from Chicago to London; from Cleveland to New Orleans; from St. Louis to San Francisco.

2. Name the three geyser regions of the world. What are geysers?

3. Name and locate the leading wheat producing countries of the world; the countries producing the greatest amount of each of the following:—gold, silver, tin, copper, iron, lead, diamonds, coal, tea, silk, hemp, coffee, (pork, beef), machinery, drugs, valuable horses, cattle, sheep, hogs, lumber, rice, fruits of various kinds, fish, sugar, spices.

4. Name, describe and locate the six longest rivers of the world; the ten largest cities of the world; five main railroad-trunk lines of the United States; a few of the natural wonders of the world.

5. How do the natural features of a country affect the occupations of the people? (The teacher should take great pains to explain this to the four upper grades at various times as the lessons on the different sections and countries demand).

6. Draw outline maps of the grand-divisions from memory, locating on them the most important land and water forms, and cities.

7. In connection with the study of the Races, introduce stories of characteristic people of different parts of the world.

8. What are exports? Imports? Tell what the people of the home region in particular, and other parts of the world in general, receive in exchange for their produce.

[NOTE:—The above outline of the work of the different grades may be divided into three terms, or two terms, at the discretion of the teacher or superintendent.]

Reference Books of Practical Value in Connection With This Course:

1. All of Frank G. Carpenter's Geographical Readers.
2. Andrew's "Seven Little Sisters" and "Each and All."
3. Carpenter's "How The World Is Fed," "How The World Is Clothed", and "How The World Is Housed".
4. "Stories of Indian Children."
5. King's "Geographical Reader".

6. *For Teachers*:
   (a.) "Way Marks For Teachers".—Arnold.
   (b.) King's "Methods and Aids In Geography."
   (c.) Carver's "How To Teach Geography".
   (d.) Frye's "Brooks and Brook Basins".
   (e.) Frye's "Child and Nature".

PHYSIOLOGY.

By O. W. Kurtz, *Bedford, Ohio.*

Statutory requirements, Ohio School Laws:—

Section 7723—The nature of alcoholic drinks and other narcotics, and their effect on the human system, in connection with the various divisions of physiology and hygiene, shall be included in the branches to be regularly taught in the common schools of the state, and in all educational institutions supported wholly or in part by money from the state.

Sec. 7724—Boards of education and boards of such educational institutions shall make suitable provisions for this instruction in the schools and institutions under their respective jurisdictions, giving definite time and place therefor in the regular course of study; adopt such methods as will adapt it to the capacity of the pupils in the various grades; and to corresponding classes as found in ungraded schools. The same tests for promotion shall be required in this as in other branches.

Sec. 7725—In all teachers' institutes, normal schools, and teachers' training classes, hereafter established by the state, adequate time and attention shall be given to instruction in the best methods of teaching this branch.

Sec. 7726—No certificate shall be granted to any person to teach in the common schools of the state, or in any educational institution supported by the state who does not pass a satisfactory examination on such subject and the best method of teaching it.

Sec. 7727—The state commissioner of common schools shall see that the provisions of the next two preceding sections relating to county teachers' institutes, and schools and classes by whatever name hereafter established for the training of teachers, and the examination of teachers are carried out. Each year he must make a full report of the enforcement of such sections in connection with his annual report.

Sec. 7728—Makes ample provision for the enforcement of the above sections under penalty.

Sec. 1644—Classifies a child under seventeen who uses cigarettes as a "delinquent child" and amenable to the law.

—Prohibits the selling, giving, or furnishing to any child under eighteen years of age, cigarettes, cigarette wrappers, cigars or tobacco, under penalty of the law.

Other sections of the law make ample provisions against the selling, giving or furnishing of intoxicating liquors to minors.

It must be apparent from the above statutory enactments that the state considers it necessary by every legitimate means to conserve the health and morals of its future citizens by imparting such useful scientific knowledge as to the care and protection of our bodies as shall best contribute to the health, strength and happiness of the boys and girls of our commonwealth. There can be no doubt as to the wisdom of the state in incorporating the above provisions into our educational system; nor can there be any doubt as to the advisability of the state protecting the youth against the sale, giving or furnishing of any articles detrimental to their health or morals. A knowledge of our bodies and how to care for and protect them is essential to the health and happiness of all. Lack of this knowledge and the ability to apply it has brought sorrow and ruin to thousands of our young people. Intoxicating liquors, tobacco, and the deadly cigarette have wrought havoc among our school population. Thousands of our youth fall ready victims to these evils every year. The public, some parents, and, we are sorry to say, a few teachers are by their example and influence contributing to the encouragement of this evil. "The saloon" and "the cigarette shop" are a menace to the public schools and the state. These two sources of evil rob our boys and girls of many golden opportunities, and destroy the brightest prospects of young manhood and womanhood. The time has come when no teacher should be retained or employed in our public schools who indulges in either of these forms of evil.

Sex-hygiene.

The demand is being made by the public that sex-hygiene be taught in our public schools. All text books on physiology have thus far kept aloof from this subject, and up to the present time, the writer has no knowledge of any text book on this delicate subject which he considers at all proper to place in the hands of the pupils in our schools. Indeed so delicate a subject suggests the advisability of oral instruction by thoroughly competent teachers only. We agree however that with a skillful teacher this subject may be approached through nature study and biology in such a way as to impart much useful information with beneficial results.

Laws of health and fixed habits of application.

In all the elementary grades special emphasis should be placed upon the laws of health and their daily application. These laws should be clearly stated, carefully memorized, and so thoroughly applied that correct habits will result. This end can only be attained by daily application on the part of teacher and pupils.

Sanitation and civic pride.

The public schools may become a source of much valuable informa-

tion along the lines of public sanitation and civic pride. The school buildings, and grounds should be models to the community in the matter of sanitary surroundings. The teacher and the pupils should see to it that the school premises are always in a presentable shape. No rubbish or filth of any kind should be allowed to accumulate on any part of the school grounds or about the buildings. Trees, shrubbery, and flower beds should be so disposed about the grounds as to be a constant source of inspiration to the community to clean up around the homes, vacant lots, and public highways. By the use of judicious methods on the part of the teacher much good may be accomplished in the community and public health be greatly enhanced. Civic pride is contagious, and a little encouragement on the part of the school may cause a whole neighborhood to "clean up."

SUGGESTIVE COURSE OF STUDY.

In the lower grades this subject may be taught orally. Care should be taken in all the grades to meet the requirements of the law on the subjects of alcohol and narcotics. Special emphasis should be placed on the laws of health and hygiene in every department of the work. In all the oral work it is best for the teacher to follow some good elementary text that each topic may receive its proper share of attention. In the first four grades two or three twenty-minute lessons per week may be sufficient, and, if properly directed, may result in establishing correct habits of neatness and cleanliness among the children. Constant application of the laws of health and hygiene is an essential feature of the work in all grades. Well-selected experiments, and a judicious use of the microscope will serve to awaken interest and fix important truths and principles in the minds of the pupils.

First Year.

(a) Teach correct position of body for sitting, standing, walking, marching. Drill on each, requiring prompt and accurate responses to every direction.

(b) Teach parts of body, using simple terms for each, emphasizing proper care of each part.

(c) Teach kinds and uses of simpler foods and their sources of supply.

(d) Teach simple laws of health calling special attention to cleanliness and neatness. Insist on the application of these among pupils.

(e) Use carefully prepared lessons on eating, sleeping, playing and working. Give lessons on the evils of the use of alcohol and tobacco.

(f) Make use of easy experiments and stories to awaken interest, and impress truths.

(g) Give lessons on the use and care of the skin, nails, eyes, ears.

Second Year.

(a) Review briefly the work of the first year enlarging upon each topic to suit the age and understanding of the pupils.

(b) Teach important truths about foods, drinks, teeth, stomach, muscles.

(c) Call special attention to the parts, use, and care of the skin, nails, eyes and ears.

(d) Emphasize the laws of health and their application.

(e) Easy lessons on the evils of alcohol and tobacco.

(f) Illustrations from stories read and told by the teacher, and re-told by the pupils.

(g) Simple experiments to re-enforce important truths.

Third Year.

(a) Review most important parts of second year outline, enlarging on each topic as seems best to suit grade of pupils.

(b) Memorize laws of health adding to those already given. Note carefully their application among the pupils.

(c) Give carefully prepared detail lessons on the parts, uses and nature of the skin, lungs, bones, hair, nails, muscles, etc.

(d) Call special attention to the effects of strong drink and the cigarette, upon the different organs of the body; also effect upon the character, reputation and employment.

(e) Emphasize the care and proper use of the different sense organs.

(f) Use simple experiments, and have children discuss and write about same.

Fourth Year.

(a) Carefully go over the more essential parts of third year work.

(b) Enlarge in detail upon the following topics:—parts of body, foods, digestion, circulation, respiration.

(c) Emphasize laws of health and insist on their careful application.

(d) Give lessons on the evil effects of alcohol and tobacco upon the different vital organs of the body. Note the results of these habits upon the individual, morally, financially, socially.

(e) Conduct careful experiments and make frequent use of the microscope.

(f) Complete work outlined in any good elementary text.

Fifth Year.

(a) Use material as outlined in any good intermediate text book.

(b) Study carefully the following topics:—heat, clothing, ventilation, skin, brain, nerves, spinal cord, senses, bones.

(c) Memorize and discuss the laws of health. Enlarge upon their application.

(d) Study carefully the effects of alcohol and tobacco upon the stomach, liver, kidneys, lungs and brain.

(e) Give such experiments as will illustrate some of the more important truths in the above year's work.

Sixth Year.

(a) Review and continue work of fifth grade, adding new material to each line of thought as seems best adapted to age of pupils.

(b) Study carefully and make drawings of the different parts of the eye, ear, brain, lungs, heart, liver, kidneys.

(c) Study and discuss the following: touch, bones, joints, muscles, ligaments, different tissues.

(d) Study dislocations, cuts, bruises, sprains, burns, drowning, poisoning, and their treatment.

(e) Use microscope freely in the study of tissues, bavteria.

(f) Conduct carefully prepared experiments throughout the year to re-enforce important facts.

(g) Review the laws of health and hygiene emphasizing the application of the same.

(h) Note the evil effects of the various intoxicants and the forms of tobacco on the different vital organs of the body.

Seventh Year.

(a) In this grade a good advanced text book may be used completing about one-half or more of book. Use topical method. Have pupils read different texts on each subject. Drawings should be made on paper and blackboard by pupils, followed by careful explanations and discussions.

(b) Careful experiments should be made by pupils in the presence of class. Encourage questions and suggestions on part of pupils.

(c) Place special stress upon scientific temperance and hygiene. Do not fail to call attention to the moral and civic phase of this subject. Note its effect upon different kinds of employment.

(d) Memorize the rules of health and show how their daily application contributes to the efficiency of the body in performing labor and in the length of life.

(e) Review carefully the digestive, circulatory, and respiratory systems; show how proper exercise affects these systems.

(f) Discuss the subjects of ventilation, pure air, sanitary surroundings.

(g) Prepare an outline study of foods; the kinds, preparation,

cost, value in building up the various tissues, substitutes for the more costly kinds.

Eighth Year.

(a) Review thoroughly the subjects covered in the seventh year during the first two months. Complete the text by the end of the seventh month.

(b) Review the following subjects carefully:

1. The osseous system making a careful study of joints.
2. The circulatory system tracing the blood through the body.
3. The lymphatic system and its relation to the other systems.
4. The respiratory system, and need of pure air and good ventilation. Effects of city air, country air, moist air, dry air.
5. Muscular system, noting kinds and uses of different muscles.
6. Nervous system and its relation to other organs, and to health.
7. The digestive system, tracing the food and naming the different organs through which it passes; the digestive fluids secreted in each organ, and the principal ingredient of each.
8. The various tissues and their uses.

(c) Review and complete the rules of health, discussing their effect upon length of life, efficiency of the body, happiness.

(d) Make use of experiments to illustrate important truths. If possible, use compound microscope to study bacteria, blood corpuscles, and tissues. Note different kinds of bacteria-producing diseases.

(e) Have pupils make drawing on paper and blackboard as in former grades.

(f) Study the subjects of foods, clothing, diseases and their prevention, accidents and their remedies, poisons and their antidotes.

(g) Carefully review the laws of health, making such additions as seems wise.

(h) Review the entire subject by questions.

High School.

(a) Where physiology is made a branch of the high school course, the latest up-to-date text should be used. By means of the topical method other texts should be consulted, thereby broadening the viewpoint of the pupil on each subject. The class should have access to several different texts.

(b) Considerable attention should be given to drawings both on paper and board to illustrate important parts of the work. Many experiments should be given by the pupils to illustrate practical truths and awaken a real interest in the subject.

(c) The compound microscope and slides should form an important part of the practice work, especially in the study of the tissues, cells, corpuscles, bacteria.

(d) Much stress should be placed on the laws of health, public sanitation, and civic pride.

(e) A most careful study should be made of the effects of alcohol and narcotics upon the vital organs of the body; also their effect upon character, reputation and efficiency of the individual; the general effect upon society, state and nation.

(f) Diseases and their prevention, accidents and their remedies, poisons and their antidotes should receive careful attention.

MUSIC.

By Wm. McK. Vance, *Delaware, Ohio.*

INTRODUCTION.

Music, one of the five fine arts, is indissolubly linked with patriotism, morals, and religion. From the angels' song at the birth of the Babe of Bethlehem to the wedding bells of yesterday and the funeral dirge of today, music touches life at many points. Its cultural and social values are beyond computation or estimate. The world would be poor indeed without the mother's crooning lullaby and the school boys whistle, without the art of Caruso and Schuman-Heink; without the symphonies, and oratorios of Beethoven and Handel.

PURPOSE.

It is the purpose of public school training in this subject to give boys and girls the ability to read at sight, first, simple music, and later, more difficult compositions, and in our most advanced schools to master even the highest and best forms of concerted works. That purpose also includes the development of a correct musical taste. There is just as much difference in musical composition as in literary composition. We teach the master-pieces of English and American authors in order that the child may come to appreciate and enjoy the best thought and expression in the language; that he may distinguish not only between the good and the bad in literary art but also between the worthy and the less worthy; that he may come finally to love only the true and the beautiful, and that his own literary efforts shall be marked by a certain excellence of form.

Music has the same psychological ground as literature for place in our course of instruction, and it deserves the same rational treatment. Children should study masterpieces. These are found in folk songs,

the great hymns of the church, in simple as well as the more elaborate songs and choruses of such composers as Mozart, Mendelssohn, Schubert, Liszt, Wagner, Haydn, and in the beautiful productions of a host of modern writers from Joseph Barnby to Eleanor Smith. Fortunately, we can scarcely go amiss in the choice of songs for children, so richly and so abundantly have the best things in the world been grouped for us by musically skillful and scholarly editors, and put forth by painstaking publishers. All that is needed is enlightened teaching in the public schools, particularly in villages and rural districts. This presupposes the support of the best people of each community, and the utter annihilation of the notion that music is one of the "frills" of modern education. Instead, it is a part of the warp and woof, and it gives color, and beauty and value to the entire product.

When music shall thus have received its proper evaluation, an element of culture and refinement will then become a universal trait of our citizenship—a trait that is now only local and partial. A musical atmosphere will develop over our entire country, that will drive out the pestilence of the inartistic songs of the minstrel and vaudeville stage, and the tawdry music which now so often mars religious services. We must have art for the elevation of the spirit, and this form of art lends itself particularly to universal uplift and joyous expression.

REMARKS CONCERNING THIS COURSE.

This particular course is offered in a wholly tentative way. We are unpracticed in Ohio in this beautiful art in our rural schools, and hence have no basis of previous experience on which to begin except in the case of a few townships where music supervisors have been employed. Such instances are few and inconsiderable. For this reason, a two years' course only is suggested at this time. The first year's work is for beginners, little and big; the second, for those who have some knowledge of music, and such will be found in almost every district. Even these may profitably take the first year's work with the beginners.

B. CLASS—BEGINNERS.

1. *Rote Songs.*

1. A child learns to sing by singing. Through the Rote Song we encourage individual singing and develop confidence, naturalness, and spontaneity. Through it we train the ear and voice, and develop rhythm, expression, articulation, as well as a love for music.

2. In the selection of Rote Songs, great care should be taken to see that such songs are within the compass of the child's voice. The words and content should be clearly within the understanding of the child, and the music should be free from melodic difficulties.

3. The teacher should sing the song through two or three times so that the children can get an impression of the song as a whole. Then

a phrase should be presented at a time, the children repeating until the song is learned. Never present the words and music separately.

EAR TRAINING.

1. Ear training is of vital importance, as there can be no advancement until the child is able to recognize and to reproduce musical sounds. Children should be taught to match tones by the ear as they would colors by the eye.

2. Children are taught to recognize familiar rote songs when sung by the teacher with the syllable "la." Later they recognize the syllables of the scale—and tone lengths—by the same method.

3. If there is a monotone, one without the sense of pitch, in the class, ask him to listen for he must first learn to *hear* the tone before he can *reproduce* it. Give him a seat where he may hear best; and frequent individual tests alone if possible. If with patience you are able to develop "do, re," proceed to the next step, "do, re, mi," "do, re, mi, fa," and so on, until the scale is mastered.

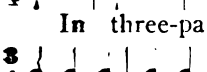
RHYTHM.

1. Children respond to rhythm as naturally as they do to melody. Exercises in rhythm should be employed from time to time, as for example, marching, motion songs, calisthenics, etc.

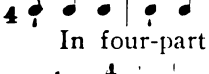
2. From the beginning of note reading, pupils should be taught to beat time, and to note accent by placing a slight emphasis on the accented beat.

3. Measures are equal portions of time and are divided into equal divisions called parts. A measure having two parts is called *two-part* measure; having three parts, *three-part* measure; having four parts, *four-part* measure; and one having six parts is called *six-part* measure.

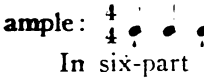
4. In two-part measure the first part is accented. Example:

 The beats are *down, up.*

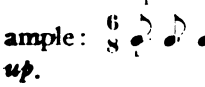
In three-part measure the first part is accented. Example

 The beats are *down, left, up.*

In four-part measure the first and third parts are accented. Example:

 The beats are *down, left, right, up.*

In six-part measure the first and fourth parts are accented. Example:

 The beats are *down, up.*

An excellent way to practice beating time is to sing the beats in each kind of measure to each tone in the scale.

5. In this connection teach the significance of 2/2, 2/4, 3/4, 4/4, 6/8, etc., when placed at the beginning of a piece of music or exercise; also, the bar and the double bar.

The Major Scale.

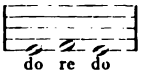
1. The class should repeat in unison, 1, 2, 3, 4, 5, 6, 7, 8; 8, 7, 6, 5, 4, 3, 2, 1. The teacher may then sing these numbers in exact pitch, first alone, and then with the pupils until as a class they sing quite readily.

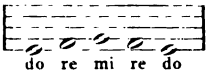
2. The teacher and pupils will then sing together and alternately the first three tones of the scale, 1, 2, 3; 3, 2, 1; do, re, mi; mi, re, do. Then in like manner, 3, 4, 5; 5, 4, 3; mi, fa, sol; sol, fa, mi. Then the first five tones of the scale, 1, 2, 3, 4, 5; 5, 4, 3, 2, 1; do, re, mi, fa, sol; sol, fa, mi, re, do. When the pupils can do this reasonably well, the teacher will teach in like manner, 5, 6, 7, 8; 8, 7, 6, 5; sol, la, ti, do; do, ti, la, sol. The whole scale should now be sung, ascending and descending, using the numbers and syllables alternately. The pitch should be the key of C. These eight-tones are called the major scale.

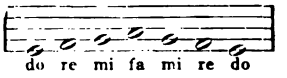
3. The major scale should be sung frequently using the syllables lä and lōō, and the vowel sounds, particularly ä, ō, and ōō. The pupils should now learn to sing any tone the teacher calls for. The major scale may now be written on the board, without the use of lines in order to avoid confusion in the visualization of the staff, thus:

8—Do.
7—Ti.
6—La.
5—Sol.
4—Ta.
3—Mi.
2—Re.
1—Do.

By means of the pointer the teacher will indicate, for example, tone 3, and the pupils will sing mi; then 5, and the pupils will sing sol; then 3, mi; 6, la; 4, fa; 5, sol; 7, ti; 8, do; etc., etc. He will then sing a certain syllable, and the pupils will name the tone by number, and so on through the scale. Soon ability should be developed to carry on such exercises without the written or printed scale, or scale ladder, before t he eyes of the pupils. Teach the five steps, and two half steps in the major scale, noting particularly the half steps between 3 and 3; and between 7 and 8.

4. The staff may now be employed in teaching tone relationship. Begin by placing a note on any line or space, calling it the "do" line or the "do" space. For example write 

and ask the pupils to sing it. Then write 

and 

and have these exercises sung. Have pupils note that each time we return to "do." This is important, for we wish to make the following impressions:

First—The position of "do."
Second—The position of other syllables with relation to "do."
Third—Power to sing other syllables and return to "do."

5. It is important that the position of "do" be changed frequently

so that the children shall, from the beginning of syllable work, read from "do," and not from any fixed position on the staff. They should know that the scale is a family of tones, always bearing the same relation to each other both in position and pitch.

6. The following is a good test of the pupils' knowledge of the major scale. The teacher may sound C on the pitch pipe and tell the children to call it "do," and sing down to "sol." Hold the tone, but change the syllable to "mi"; then sing to "do," change the syllable to "la," and sing to "do." The pupils soon learn when the syllable is changed, the order of intervals is changed likewise. They must immediately think of the arrangement of the scale, and just what place that particular tone occupies in the new scale before they can adjust themselves to the new order of intervals.

The Staff.

1. The staff, consisting of five parallel lines and the spaces, should be painted on one of the boards. Teach what each line and space represents, and that the staff is a device to represent the pitch of tones. The pitch names from C on the first added line below, to G on the space above, should be placed on the staff and carefully learned. Well known mnemonic aids may be employed in helping children to memorize the letters of the staff. The teacher may write on the lines of the staff, beginning with the added line below, these words in order: C-ertainly E-very G-ood B-oy D-eals F-airly,—the initials being the pitch names of the lines. Each letter of the mnemonic word F A C E will serve to indicate the four spaces of the staff,—D the space below, and G above, being learned by relation position.

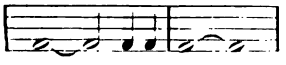
2. Pupils should have much practice in writing pitch names, scale names, and syllables on the staff. The test of proficiency will be in having each pupil give quickly and accurately the letter, number, and syllable on each line and space. The visualizing of the staff and the major scale written thereon in all positions, is the secret of success in reading music.

NOTES AND RESTS AND THEIR ACCESSORIES.

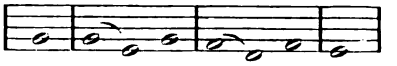
1. Notes are characters used to indicate the length of tones. Rests are characters used to indicate the length of periods of silence.

2. Teach the whole note, 𝅝, and whole rest, 𝄻; half note, 𝅗𝅥, and half rest 𝄼; quarter note, 𝅘𝅥, and quarter rest, 𝄽, eighth note, 𝅘𝅥𝅮, and eighth rest, 𝄾; sixteenth note, 𝅘𝅥𝅯, and sixteenth rest 𝄿.

3. A tie is a curved line connecting notes on the same degree of the staff to make them represent one tone-length thus:



A slur is a curved line over or under notes on

different degrees of the staff, indicating that the tones are to be sung to the same syllable, as, for example: 

4. A dot placed after a note or a rest adds one-half to its length. When two dots are so placed, the second dot adds one-half the length of the first. Write examples.

5. Familiarity with the foregoing can be developed by asking the pupils questions, as, for example: A whole note equals how many halves? How many quarters? How many eighths? How many sixteenths? A half note equals how many eighths? The dotted half equals how many eighths? A tied half and quarter equals how many quarters? etc.

6. The hold expression marks, repeat marks, and words indicating the time should be taught in connection with the pieces of music where they occur.

SIGNATURES AND KEYS.

1. Characters called clefs, 𝄞 𝄢, when placed on the staff indicate the pitch which a single staff line or space represents. Thus the G clef, 𝄞, indicates that the line around which it curls, the second line, represents the pitch called G. The staff thus marked is called the treble staff.

The F clef, 𝄢, indicates that the line around which it curls, the fourth line, represents the pitch called F. The staff thus marked is called the bass staff. As the pitches follow in alphabetical order, knowing one pitch enables us to give the pitch name for every other staff degree.

2. Impress upon the pupils the result of placing a clef upon the staff,—that, whereas, up to this time, the lines and spaces have stood only for first, second, and third line, first, second and third space, etc., the clef transforms them into definite pitches with letter or pitch names.

3. Pupils should now be taught to recognize the key; that "do" is called they key-note; that the clef 𝄞, one or more sharps, ♯, and one or more flats, ♭, are used as the sign to locate the key-note, namely, one (1) of the scale, and that when so used, these characters are called the signature of the key.

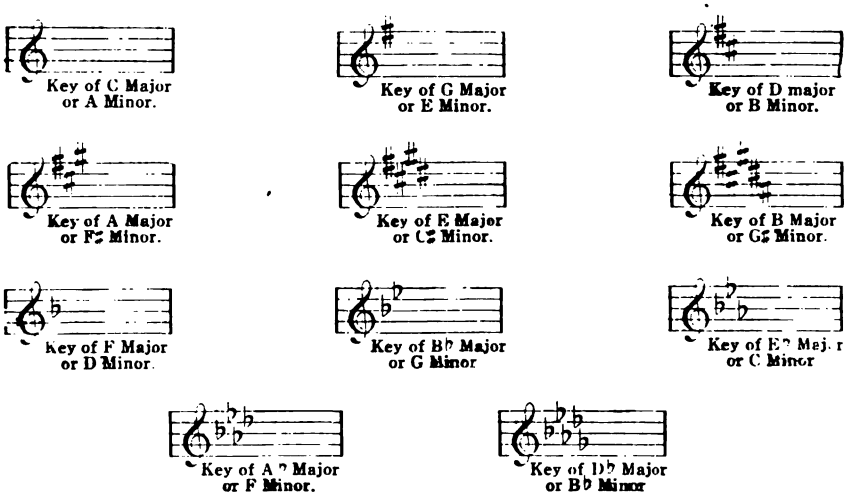
The beginners have already learned that the first tone of the major scale may be on any line or space of the staff. The letter that one (1) of the scale is on is the name of the key.

4. When the clef alone is the sign, that is, when there are no sharps nor flats in the signature, one (1) of the scale is on the added line below the treble staff. "Do" is accordingly on this line and on the third space, and the key is "C."

When sharps are used, the last, or the one farthest to the right, is always on "ti" or seven (7) of the scale, and the next note above this is "do" or the key-note. "Do" may also be found by counting down seven tones of the scale.

When flats are used, the one farthest to the right is always on "fa" or four (4) of the scale. "Do" will be found by counting down four tones of the scale.

5. The signatures of the principal keys, major and minor, are given here for convenience, though the minor scale and minor keys properly belong to a more advanced stage of musical instruction.



6. Mnemonic device for Major Keys: (1) *Sharps.* (1) G-ive (2) D-m (3) A-ttention, (4) E-very (5) B-ody.—Flats. (1) F-at (2) B-oys (3) E-at (4) A-pple (5) D-umplings.

THE SONG BOOK.

1. A suitable book should now be placed in the hands of pupils,—indeed, long before all the keys are developed, for no teacher can find time to place on the board all the exercises needed to give even an elementary knowledge of the major scale in all the keys.

2. Probably no one book will meet the needs of all schools. A liberal provision of supplementary song readers, or song collections, is quite as much to be deserved as of literary readers. A brief bibliography of song material is appended herewith.

A CLASS.

1. Those who have some musical knowledge may well review it with the beginners' class. On the other hand, the beginners should be allowed to participate at the earliest possible moment in the work of the A class, and be earnest listeners to instruction of this class always.

Older children enjoy guiding and entering into the interests of the younger ones. This feeling should be fostered by the teacher from the beginning.

2. The work of the A class will be largely with the book which ought to furnish both methods and an abundance of material. But the wide-awake teacher will have constant recourse to the blackboard in the development of tone relations, particularly the practice of difficult intervals; scale structure in general in teaching the chromatic scale, and in showing the cause for the change of signature.

3. Two-part and three-part songs should be taken up at the earliest moment practicable. Divide the class into groups, and let the groups exchange parts frequently.

Rhythmic types and figures should be developed both through the eye and ear. Chords should receive attention, — particularly the tonic, subdominant and dominant triads.

4. Pupils should become thoroughly familiar with the characters affecting pitch, the sharp, the double-sharp, the flat, the double-flat, the cancel, and with the offices which they perform.

Pupils should also know the intermediate tones which may be introduced into the scale ascending, — sharp-one, sharp-two, sharp-four, sharp-five, and sharp-six. Also, the intermediate tones which may be introduced into the scale descending, — flat-seven,, flat-six, flat-five, flat-three, flat-two.

5. Note that 5 ♯4 5, sol fi sol, sounds like 8 7 8, do ti do, sung from the same pitch.

In the key of C and in keys having sharps in the signature, sharp-four, (♯4), is represented by a sharp, ♯.

In keys having flats in the signature, sharp-four, ♯4, is represented by a natural, ♮.

6. Note further that 6 ♭7 6, la te la, sounds like 3 4 3, mi fa mi, sung from the same pitch.

In the key of C and in keys having flats in the signature, flat-seven, ♭7, is represented by a flat, ♭.

In keys having sharps in the signature, flat 7, ♭7, is represented by a natural.

7. Encourage the writing of original exercises. Have the best ones copied on the board and sung by the class. Occasionally have the pupils write from memory the melody of familiar songs.

8. Present the staff as a whole, — the combined treble and bass staves. This is called *the great staff,* and was formerly written as a single staff of eleven lines.

Have both boys and girls practice scales and exercises on the bass clef, accommodating the pitch to their voices. The full bass part of many songs should thus be sung. So long as the position of the scale on the staff is kept clearly in mind, one clef is sung as readily as another.

9. Teachers will find a standard of accomplishment in the following words quoted from an eminent musical authority, Dr. Frank Damrosch of New York:

"When the child leaves school he should be so equipped musically that he can appreciate and enjoy good music, can sing fifty to a hundred good songs, can read at sight any simple melody or a second or third part in a chorus, can write a melody from hearing, detect impurity of intonation, and sing with a clear, true, musical voice and correct intonation."

GENERAL SUGGESTIONS.

1. The air of the room must be fresh and pure.
2. A singing position should include:
   a. Feet on floor.
   b. Spine erect, not touching back of desk or chair.
   c. Chest out.
   d. Heat erect.
   e. Eyes centered on teacher.

It is often well to have pupils stand while singing a song.

3. The details of which the teacher must be critical in song singing are:
   a. Breathing.
   b. Pitch.
   c. Time and tune.
   d. Attack.
   e. Tone quality.
   f. Phrasing.

4. In chorus singing voices should blend or melt together so that no one voice is prominent. The teacher's voice in leading should always be subdued.

5. Do not strain children's voices. They are delicate instruments and are easily injured. The soft tone is the one to cultivate as it is not only more musical and truer to pitch than the forced tone, but it also strengthens and renders flexible the voice, and preserves it even to old age.

6. Seat older pupils according to parts, and the younger pupils in front of the sopranos. While the latter will not always comprehend all that the others do, their interest will be aroused and they will make

real progress if they are encouraged to follow the printed page with the eye and to sing, though their early singing may be almost wholly by rote.

7. Aim at thorough mastery of the major scale. This is absolutely fundamental.

A knowledge of the major scale means far more than the ability to sing it ascending and descending. Familiarity with this scale enables one to grasp instantly an interval between two notes upon the staff, and also to recognize the same tones when played or sung, and to associate them with the corresponding syllables of the scale.

8. The pitch of tones as well as their qualities must be imaged before they are sung.

9. The daily music period should be at least fifteen minutes long. Some extra time can occasionally be found during the noon period or other intermissions in bad weather.

10. Do not dwell on exercises too long,—certainly not until they are memorized. Many songs should be learned by heart, but not exerscise melodies. Write on the board flresh exercises,—brief and to the point.

11. A different song studied each day rather than the same song repeated until it can be artistically sung, is advisable until pupils begin to feel some independence in music readings. Indeed, keeness of interest will be stimulated if the music be always new.

12. Be careful to pitch the song correctly. Do not guess at it. Use a pitch pipe or tuning fork.

13. The teaching of music is much like the teaching of other branches. There is no essential difference. The most successful teachers are those who give their pupils little theory and much practice.

14. The technical part of the music lesson period may be divided into three parts, as follows:

1. Tone drill, oral, two or three minutes. Drill on tones and intervals which the pupils do not know. Part of the work, especially in the primary grades, should be by imitation. Remember that imitation is not to be decried in musical instruction, but often should be used as a fundamental method.

2. Individual work, oral, two or three minutes. Dictate rapidly one or more tones to each member of the class, or have each pupil sing a short phrase at sight. Do not let one pupil absorb your attention at the expense of other pupils.

3. Drill on principles of time and tune, using book or board.
   a. Change the key often.
   b. Work on what the class does not know.
   c. Review work frequently.
   d. If the time is hard make the tune easy, and *vice versa.*
   e. Several short exercises in different keys are better than one long exercise bringing in the principle several times.

15. Songs should be selected suitable to the seasons of the year and the national festivals. Other correlations, as for example, with the language, literature, and history work, when feasible, should be made.

16. Patriotic songs should be taught in every grade, and sung so frequently as to become the permanent possession of the children. This is particularly true of "America," "The Star Spangled Banner," "Columbia, the Gem of the Ocean," and "The Battle Hymn of the Republic," Boys and girls should be taught to stand respectfully at attention whenever they hear the strains of "The Star Spangled Banner."

17. Avoid common mispronunciations in these songs, as, for example, "Land of *thy* (the) pilgrims' pride."

Other errors in pronunciation are common, as, for example: mo-ur for more, yu-er for your, gether for gather, angul for angel, murrully for Merrily, Christmus for Christmas, peopul for people, etc., etc.

The singing period should not make the reading exercise more difficult. Remember that correct and beautiful speech is contributory to good tone production, and is the chief factor in expression.

18. The success of this work depends on the teacher. His preparation for the music lesson must be as thorough as it is for the arithmetic. He must be ever an active leader, and never a mere onlooker.

Even if the teacher possesses no voice and but little musical knowledge, much may be done. He may not acquire the former, but he may increase the latter. Then, if he but tactfully enlists the co-operation of the older pupils who already have some musical taste and ability, he will be able to lead all the children and himself into an appreciation of and a measure of proficiency in this beautiful art.

19. In village and consolidated rural schools, one of the standard music series, comprising from two to five books, is advised.

BRIEF BIBLIOGRAPHY.

Rote Work, Primary Songs, Aids to Teachers.

Manual and Books I and II of The Eleanor Smith Music Course. American Book Co.

Books of Children's Songs, by Eleanor Smith. Silver, Burdett & Co.

Books of Children's Songs, by Jessie Gaynor. John Church Co.

Art Song Cycles, by Miessner and Fox. Silver, Burdett & Co.

New Educational Music Course, First and Second Readers. Ginn & Co.

Teachers' Edition of New Educational Music Course for Elementary Grades. Ginn & Co.

Natral Rote Song Book. American Book Co.

Modern Primer. Silver, Burdett & Co.

Common School Book of Vocal Music. Silver, Burdett & Co.

Short Course in Music, Book I and Manual to accompany same. American Book Co.

Earth, Sky, and Air in Song, by Neidlinger. American Book Co.

Primers, First and Second Readers of the National Music Course. American Book Co.

The Juvenile Wreath, by J. D. Luse. The Wreath Publishing Co.

Songs in Season, Flanagan Codas. Ginn & Co.

Song Reader. Ginn & Co.

Aikin's Music Course in One Book. American Book Co.

Primary Melodies, Newton. Ginn & Co.

Progressive Melodies for Sight Singing. Ginn & Co.

SONG MATERIAL FOR GRAMMAR GRADES.

Songs We Like to Sing. Silver, Burdett & Co.

Common School Book of Vocal Music. Silver, Burdett & Co.

Songs Every One Should Know. American Book Co.

Silver Song Series; Beacon Song Series. Silver, Burdett & Co.

Columbian Song Book. Tomlins.

Eleanor Smith Music Course. Books III and IV. American Book Co.

Gantvoort's School Music Reader. American Book Co.

Songs of All Lands, Mathews. American Book Co.

McCaskey's Favorite Song and Hymns. American Book Co.

Song Year Book, Helen Place. Silver, Burdett & Co.

New Educational Music Course Books, Third, Fourth and Fifth Readers. Ginn & Co.

Short Course in Music, Book II. American Book Co.

Song Reader. Ginn & Co.

Songs of the Flag and Nation. Hinds, Noble & Eldridge.

The Academy Song Book, Codas. Ginn & Co.

The Ideal Wreath, Book 2 of the Wreath Music Series.

The Sovereign Wreath, Book 3 of the Wreath Music Series (J. D. Luse) Wreath Publishing Co.

The School Song Book. C. C. Birchard & Co.

To the Boards of Education, Superintendents and Teachers:

Agriculture is not a wholly new subject, nor is it one foreign to our public school system. The last General Assembly made it a mandatory part of our courses of study for the Elementary and High Schools. The wisdom of this is patent to us all.

This course of study arranged by the four Supervisors of Agricultural Education and myself is intended to suggest ways and means of giving to our boys and girls of all the schools the most helpful plans of acquiring a comprehensive knowledge of those parts of the subject that are appropriate and the study of which will be profitable; it is further intended to teach the happiness, health, and wealth of country life and to make the boys and girls proud of rural life whether they live in the country or not.

In laying out the work for the year, it should not be presumed that all found in this course is to be studied or taught; the material herein is suggestive throughout; select from it what is wholesome and in harmony with the agricultural and home life of your several communities; select only sufficient topics and amount of work as can be well done during the year; it might be well to outline the work month by month so that too much may not be attempted; four or five subjects properly planned for the year's work and well taught may be sufficient for the average school, for agriculture and home craft are to have only their appropriate share of the time and efforts of the teachers and pupils,—the other studies must have theirs.

It will be well for the members of boards of education, superintendents and teachers to keep at hand the name and address of the Supervisor of the district in which they live for he will endeavor to answer by mail the questions sent to him and will also be glad to come to any part of his district when called upon to render any aid possible.

Finally, the teaching of this subject will have reached the stage most helpful to the boys and girls when home and school work together heartily and sympathetically; the teaching must fail in its highest and best sphere if it does not touch and retouch the farm, the farm home and all farm life; let it be our constant aim to make a happier and a better citizenship while we are making better farmers, and better home makers; this being our ideal, the teaching of this subject will find its best results and consummation in the homes and on the farm.

Yours very truly,

FRANK W. MILLER.

OUTLINE OF A COURSE IN AGRICULTURE FOR THE ELEMENTARY SCHOOLS.

INTRODUCTION.

In the primary grade the chief object should be to lead the child to observe carefully and develop the habit of investigation. Throughout the entire course the teacher should be ever mindful of the fact that the subject of agriculture, if properly taught, is of high educative value. It imparts to the child the ability to reason, the power of independent thinking and creative expression, richness of imagination, appreciation of that which is beautiful, and the culture which are generally developed through the instrumentality of the classics, mathematics, science, and art.

It is not the intention of this course to make farmers of all farmers' sons, but to make better farmers of those who wish to remain in that occupation, and to make better citizens of all. The subject is full of human interest and we can never wholly separate our interests from the soil on which we walk, and the plants and animals upon which our lives depend.

This course is divided into four divisions, to be known as the Primary Division, composed of all pupils below the second grade. The First Division, composed of the second, third, and fourth grades. The Second Division, composed of the fifth and sixth grades. The Third Division, composed of the seventh and eighth grades of the Elementary School.

Primary Division.

Note to Teacher: The work outlined in this division can be taught in connection with language and alternated with Oral Geography and Oral Physiology. Can also be given in connection with general exercises in the mornings or Friday afternoons.

There should be at least two ten (10) minute periods a week. The teacher shall select such parts of the following work as may be suitable for his grade, grades or school. Use supplementary work.

TREES. — Gather leaves. Note differences in size and shape. Recognize a few trees by their leaves. Some trees drop their leaves in Autumn. Some do not. Evergreens.

The different parts of plants, stems, roots, leaves, flowers, fruit, etc. Collect seeds to show how they are protected and distributed. Gather seeds of thistle, milkweed, and dandelion and let them sail in the wind. Effect of frost on tender plants like tomatoes, etc..

Make a collection of caterpillars and place in box with leaves. Observe spinning of cocoon. Emergence of moth or butterfly in Spring.

Change in appearance of landscape as winter approaches.

ANIMALS.—Animals of the farm; their uses. Wild animals found in the community, rabbits, squirrels, etc. Tell stories about them.

BIRDS. — Migration; return in Spring; permanent residents. Nest building. Learn to recognize four or five birds.

Grow cuttings of pussy willow and lilac in water. Germinate beans in sawdust. Learn the common names of a few flowers and trees. Fruit and seed come from the flower.

Note change in landscape as Spring comes.

Teach the children to be kind to animals. Teach them not to be afraid of insects and spiders. The house fly a carrier of disease. Breeds in filth. Dangers of fire.

First Division.

(Grades 2, 3, and 4.)

The work outlined in this division can be taught in connection with Language, and alternated with Oral Geography and Oral Physiology. Can also be given in connection with general exercises in the morning and on Friday afternoons.

The subject of Agriculture is now one of the regular studies of our schools and as such must be placed in the regular school curriculum for its full share of time and execution.

In this Division pupils can be taught to observe and study domestic animals, plants, trees, and bird life more extensively than in preceding division. Make seed collection and study methods of planting seeds. Observe nature's plan of seed distribution by securing samples of each method. Learn to recognize seeds of familiar farm plants. Make a study of familiar fruits and grains.

Shelter for farm animals. Natural covering of the different animals. How animals spend the winter; hibernation. Study migration of birds on basis of sojourn here — permanent residents, summer residents, winter residents, migrants, service rendered by insectivorous migrants. Take excursions when convenient to the woods and creeks, observing plant and animal life.

Care of young chickens and young farm animals. Learn to distinguish some common flowers and to know the uses of animal, vegetable, and farm products.

Experiment in growing cuttings in water, sand, or loam. Make a collection of leaves and name them. Study buds, how protected, how arranged. Teach common names of trees in your locality.

Use blackboard calendar for weather record. Study cause of rain, frost, hail, snow, and ice. (See some good text in Oral Geography).

Study use of thermometer and make records of out-of-door temperature. Use shadow stick to show altitude of sun at noon, during different months of the year. Time and place of rising sun; of setting sun. Phases of moon. Great Dipper. North Star.

Objects and specimens in this work can be used very profitably in the lessons in Drawing, in this and all following grades.

Simple experiments with seeds, germinated between blotters or cloth, and in sawdust. Study conditions of growth by varying moisture, light, temperature, etc. Peas, corn, or pumpkin seed suggested for use.

Preparation of the soil; the growth and cultivation of plants. Care and use of garden tools. Plant the seed of flowers and vegetables at home or at school. Keep a record of the work done in cultivating same. Exhibit.

The Primary and First Divisions may be combined when convenient and feasible. Time required to cover this work — three years.

Second Division.

(Grades 5 and 6.)

Teach the work outlined in the Second Division in connection with Language and Geography and alternate with lesson in Physiology, History, Arithmetic, and Reading. Work can also be done in connection with general exercises in the morning and on Friday afternoons.

Use Supplementary work.

The work in this Division should be a continuation of that suggested under "First Division." It is expected, however, that pupils are to learn more detail and become more familiar with the modes of living and the uses of plants and animals to man when they reach these grades.

The practical work at home by the pupils must be carried out as carefully as the theory study at school if we are to have a full measure of success with Agriculture in the schools. Teachers may supervise this work at home.

Review study of familiar flowers and home farm products.

Study migration of birds on basis of sojourn here — permanent residents, summer residents, winter residents, migrants; service rendered by insectivorous migrants.

Classify *plants* as useful, injurious, annuals, biennials and perennials; *trees* as deciduous evergreens, fruit trees, trees for ornament, fire-wood or commercial purposes. Study *roots* under useful, injurious, different forms and purposes. *Stems*—Aerial and underground, useful and injurious. Distinguish underground stems, bulbs, tubers, etc., from roots. Give example of each. *Leaves* — Margins, veins. *Flowers* — perfect and imperfect. Make a collection of flowers by pressing and mounting specimens.

Animals.—Fur-bearing, food-producing and domestic.

Minerals. — Make a collection of common minerals. Give a short description of each, as to uses to man, where and how mined. Make a collection of common rocks or fossils found in your neighborhood. Teach uses of limestone, sandstone, shale, coal, slate, marble and granite; how formed; where produced? Perform some simple experiments. Grow radish and lettuce for early market or home consumption—use home seed if possible. Study catalogue to gain knowledge of varieties of vegetables, etc. Experiment by planting different varieties to find those best suited to your locality.. Keep record of work done in cultivating your plots or gardens.

The Lawns. — Preparation; selection and sowing of seed; rolling; watering, fertilizing; mowing; lawn weeds and how to combat them. Special study of most common weeds found, common garden plants, and common garden insects — useful and injurious.

Study of Simple Tools and Machines. — Various levers; uses and advantages of Jackscrews, pulleys, wheel and axle, derrick, etc. Names and uses of various pieces of farm machinery; cost of each; care of tools and machinery. Plan to build a hot bed. Discuss uses of same. Distribute plants among pupils from a successful hot bed. Have a contest among pupils receiving plants to grow or from plants grown at their home. Conduct potato or other vegetable contests followed by exhibit of products — keep record of work done in cultivating. Find yield and value of products produced.

Learn to identify useful birds, injurious birds. Obtain colored pictures or birds to study, if necessary.

Origin of Soils. — Identification of sand, gravel, loam, clay, silt; experiment with soils. Study local soils. Value of farm lands and village lots. Drainage; ditches; tiles. Draw diagram showing drainage plan on home farm. House and cellar drains; distinguish between drainage and sewer tiles.

Household Pests. — Damage done; how destroy them — mouse, rat, fly, mosquito, cockroach, bed bug, clothes moth, etc.

Water Supply. — How secured. Types of wells and pumps; windmills. Methods of getting water to stock and for house use. Impure water. Garden irrigation.

Lighting Systems. — History of lighting. Methods used in your locality. Protection against fire.

Transplanting Tree Practice. — Study common trees, value for posts and ties, etc. Secure and plant useful trees at home and at school. Orchard methods. Learn to grow the common fruit tree found in your locality. Insests injurious to fruit and life history. Learn how to combat them. Distinguish between sucking and chewing forms, insecticides for each.

Good Roads. — Transportation, marketing.

Preparation and Marketing of Products. — Produce, how transported. How to deliver and ship by railroad. How to find a buyer. The merchants side of the work.

Formation of Agricultural Clubs. — What can be done for the social life of the rural people, literary and musical programs, research work, exhibits, lectures, collections of specimens in the vicinity, advice and suggestions from parents, and others, contests, preparation of Fair exhibits, etc., are all legitimate lines of work for the clubs. Let the membership be composed of any one really interested in addition to the pupils of the school. — None are too old or too young if they are interested. Let the fields, the gardens, the dairies, the lawns, the school gardens, the school farm-lots, the roads, the lanes, the river banks, and granaries be the recitation places rather than the class bench.

A book should be selected that is intended for the seventh and eighth grades.

A review should be made of the work suggested in the "Second Division" in connection with the text-book work. Lessons from the text in Agriculture can be alternated with those of Reading, Arithmetic, Physiology, etc., in these grades. Work in this division can also be assigned in connection with Grammar and Composition, and Geography also at the opening exercises in the morning and on Friday afternoons. The teacher shall select such parts of the following to be used with the text in Agriculture, as may be suitable for his grade, grades or school. Use supplementary work.

Time required for the work of this division, two years.

Fall Work.

Report of vacation activities including work done and money earned. Special study on the most important farm crop in your locality. Use and outline for this special study similar to ones suggested below on Corn, Wheat and Fruit.

Study of Corn. — Its culture and improvement. Selecting good seed. Experiments to show shrinkage by keeping over winter. Ensilage. Varieties grown in your neighborhood, history of one or two varieties. Characteristics of a good ear; simple introduction to use of score card. Factors involved in marketing corn. Celebration of Corn Day — Corn Display and Contest. (Secure free government and free state bulletins on corn.)

Study of Wheat or Other Grain. — Pupils take samples to school; examine for weed seeds and other impurities. Test one hundred grains of each sample for vitality. Method of planting, machines used in planting. Observe growing plants. What parts of the plants live over winter. History of wheat or other grain. (Secure free government and free state bulletins on culture of the grain most common in your locality.

Study of Fruit. — Study of Apple or the chief fruit crop in your locality. Characteristics of trees. Causes and remedies for imperfect fruit. Spraying. Factors involved in gathering, storing and marketing fruit. Have an exhibit of varieties grown in the district. Conduct contest. (Secure free government and free state bulletins on the culture of the fruit most cultivated in your locality.)

Weeds. — Make a collection of seeds; label. Study weeds common in grain fields, pasture, meadow and garden. How destroy each kind. See Ohio Weed Manual.

Fungi. — Compare with seed plants. Mushroom. Experiments in growing and destroying molds and bacteria; sterilization; treatment with formalin; smut, rusts, blights, rots and scabs. How combat these? Fungi that attack insects. Find examples.

Collection of Insects.—C lassify as to beneficial and injurious. Crop attacked by each. (Secure free government and free state bulletins on injurious and beneficial insects to growing crops.)

Forage Crops. — Grasses — best adapted for meadow, for pasture, variety in your locality. Use of leguminous plants. Other forage crops as rape, millet, sorghum, etc. (Secure free government and free state bulletins on Forage Crops.)

Dairying. — Compare Dairy and Beef breeds. Examples of each class; report of kind owned in neighborhood. Secure a Babcock Tester with milk and cream outfit. Test samples of milk and cream from different breeds. Calculate amount of butterfat produced in a certain period and value of same. Discuss cost of producing butterfat under various conditions. Methods of feeding, what to feed and care of cows. Plans of building sanitary barns and farm soils. Use of separators. Purefood; pure milk; pure drinking water. (Secure free government and free state bulletins on Dairying.)

These recitations must work the hands and the head, and the more the head and hands work together the better.

Organize an Agricultural Club; it brings the men and women, the boys and girls of the district together in a new social pride; the federation of these clubs in the township breaks down the old selfish district lines and the boys and girls live in a wider horizon, and its exhibits carried to the County and State Fairs and the boy and girl become parts of these fairs; into it invite all the young people of the vicinity; make the older people honorary members; give an entertainment or two and start a library with much agricultural literature in it; hand some pic-
start a library with much agricultural literature in it; hang some pic-
your school house; riscuss and study carefully at least one agricultural subject at each meeting; let the program be entertaining and instructive. The State Traveling Library will help along these lines.

Climatology of Ohio by the Ohio Agricultural Experiment Station, Wooster, O. (Bulletin No. 235.)

Winter Work.

Housing of farm animals. Special study of horse, hog or sheep. Different breeds of horses, hogs or sheep in neighborhood. Care of these animals in winter.

Farm Machinery. — Kinds, uses, value, care of. Gasoline engines, power machines, etc. History of kinds to show improvement.

Soils. — Study of structure of corn kernel; tests for starch and oil — composition of food stuffs. Secure some samples of corn products. Plant food; how plants obtain food. Test soil for acid and alkali. Elements usually lacking in soil. How these are obtained. Commercial fertilizers. Study kinds of soil. Make collection of soils. (Secure free bulletins on Soil Fertility.)

The Crop Reporter. A publication furnished by the U. S. Dept. of Agriculture can be obtained by addressing the Chief of the Bureau of Statistics, U. S. Dept. of Agriculture.

Spring Work.

Poultry Raising. — Breeds of chickens of the neighborhood; characteristics of each; feeding, housing, general care. Incubators and brooders; expenses and profits in poultry. (Secure free bulletins on Poultry Culture from state and national departments.)

Where fruit raising is practiced extensively, study propagation by grafting. Why necessary. History of some one fruit from seed to maturity. Pruning, planting and spraying of fruit trees. (Secure Spray calendar from Wooster Experiment Station, Wooster, Ohio.)

Corn Study. — Germination of seed, make corn testers; compare tests for vitality. Grading corn. History of corn. Varieties adapted to your locality. Planting methods. Experiments with depth of planting. Draw diagrams and make preparations for planting your flower or vegetable garden. Treat potatoes for scab with formalin. Examine clover and grass seed with hand lens to find weed seed and other impurities. (Secure free bulletins on Flower and Vegetable Gardening.)

Bird Study. — Make a list of native birds beneficial to farm crops. Injurious to farm crops. (Secure free bulletin on Beneficial Birds to the Farmer.)

Study clover plant, habits of growth, length of root, tubercles on roots. Identify other legumes. Examine roots for tubercles. Experiment where favorable to do so, by planting some alfalfa with and without inoculation.

Investigate methods of retaining fertility of the soil of Ohio; rotation of crops; mixing of home fertilizers; retaining moisture in the soil and value of soil mulch.

Arrange plans for vacation studies and experiments with corn, potato and other vegetables. Girls give special attention to flower and

vegetable gardens; keep simple records of all work done and conduct a corn, flower and vegetable exhibit and contest.

Tobacco Raising. — Seed, plants, care of, stripping, sorting, packing, marketing.

Orchards, forestry, hot beds, cold frames.

School exhibits, reports of work done. Fair exhibits.

Plant the different weed seeds in boxes of soils and have the children learn to know these weeds by their very early forms of growth.

On a table, a shelf, or a window sill with shelf extension, have at all times some manual work of collections of specimens, drawings, seed growing and testing, sowing, samples of farm products grown in the district, flowers, etc. Let these exhibits be changed frequently; have contesting exhibits by the pupils; have class exhibits of all the grades, for the very smallest pupil is not to be ignored in showing his work.

Collecting and mounting of specimens of the insects, seeds, flowers, fruits, grains, animal and mineral products, etc., of the township or county will be useful and pleasant work for the pupils during the sumer months and with a little help from the taecher, they will do very effective work in all the grades. Have at least one beauty spot in your school district as the result of your work in agriculture in the school,—farmhave it either on the school lot or at some home of your pupils.

SUGGESTED TOPICS IN AGRICULTURE AND THE HOUSEHOLD ARTS FOR THE GIRLS.

The Garden:

The vegetable garden, the flower garden, the small fruit garden, hot beds, cold frames, and the marketing of the products, insects and other enemies of the garden plants, sprays. Garden irrigation.

Poultry:

Chickens, ducks, turkeys, geese, etc., and the marketing of the products. The health of the barn and poultry yard families. Lice, diseases and other enemies of poultry, etc.

The Lawn:

Laying out the lawn, the flowers on it, the shrubs, trees, care of it, the enemies of the flowers, shrubs, trees, etc.

The Dairy:

Types of cattle, the milk, butter, cheese, the creamery, the milk tester, separators, etc., care of the utensils, the dairy barn, feeding, marketing the products.

The Apiary:

Bees, bee hives, swarming, diseases of the bee, honey, bee foods, etc.

Orchards and Small Fruits, Grapes.

Birds.
Melons, pumpkins, squashes, etc.
Weather Bureau. Meteorology.
Agricultural clubs, Home and School sociology, Community life.
Foods, Food Elements, Drinking Water Suppply.

Domestic Science:

Home making and house keeping, cooking, bread making, and all baking, sewing, home decorating, butter making, the health of the home and the farm premises, buying for the farm and farm home, selling the farm products, drawing and the other arts, home economics, home sociology, nursing the sick, household accounts, care of the house and prevention of sickness, laundering, recipes.

Home beautifying, making home attractive, naming the farm, the lawn, a handy kitchen, the dairy, preparing the products for market.

Exhibits and reports of pupils.
The Fairs—State and local.

General Suggestions:

Use the local papers for spreading the news and the good things done should be passed on to our neighbors.

Send to the Department at Washington, D. C., for their bulletins; do this department, no better are sent out from any board of its kind in the Agricultural College at Columbus; last but not least write to the Secretary of the State Board of Agriculture at Columbus for the bulletins of this department, no better are sent out form any board of its kind in the United States. Teachers, pupils and patrons will find excellent material on any phase of the work; good directions for detailed courses of study and for work on the farm, in the garden, at the barn, in the home and in any and all departments of farm work will be found in these bulletins that may be had for the asking; neither is the scientific side of any phase of this work neglected in these bulletins; so whatever we may wish will be easily obtained by simply writing for them.

Whatever success we may have in the school work in and at the school, our task will yet be incomplete if we neglect to see it carried to the home, to the farm and to the community in general. The teacher here has a splendid opportunity to take his or her place in the community life and activities in the school district; the teaching of agriculture must link the school and homes closer and the work of one must and will correlate the other or our whole scheme will lose much of its flavor and value. When the teacher and parent find their work overlapping and growing together in the life and ambitions of the child then indeed will the home and school take their rightful places in the child economy and child rearing; then will misunderstandings and crossing of lines of discipline be reduced to a minimum. The teaching of agriculture in some of its many phases will bring happy results along these lines that must be

seen with a mildly prophetic eye. The Agriculture Clubs will be the one strong medium for this as well as for the place where the intellectual and moral development takes place along side the study of the utilitarian Here the elements of the old spelling school, the literary society and the agricultural sciences and economy will mingle and grow into good citizen ship and moral and intellectual fiber which will make farm life just as honorable and refining and respected as any other vocation—yea even more so for the environments are happily conducive to such as nowhere else.

Names and Addresses of the Supervisors of Agricultural Education

H. L. Goll, Swanton, Fulton Co., of the Northwestern District.

S. A. Harbourt, Andover, Ashtabula Co., of the Northeastern District.

J. R. Clarke, 373 Wilbur Ave., Columbus, Franklin Co., of the Southeastern District.

Lester S. Ivins, Lebanon, Warren County, of the Southwestern District.

State Supervisors of Agricultural Education.

In accordance with the provisions of the Cahill law, Commissioner Miller has appointed four Supervisors of Agricultural Education. The names and addresses of these Supervisors, together with the counties comprising each district are as follows:

NORTHWESTERN DISTRICT.

H. L. Goll, Supervisor, Swanton, Fulton County, Ohio.

Counties — Allen, Auglaize, Crawford, Defiance, Erie, Fulton, Hancock, Hardin, Henry, Logan, Lucas, Marion, Mercer, Morrow, Ottawa, Paulding, Putnam, Sandusky, Seneca, Union, Van Wert, Williams, Wood, Wyandot—24 counties.

NORTHEASTERN DISTRICT.

S. A. Harbourt, Supervisor, Andover, Ashtabula County, Ohio.

Counties—Ashland, Ashtabula, Belmont, Carroll, Columbiana, Coshocton, Cuyahoga, Geauga, Harrison, Holmes, Huron, Jefferson, Lake, Lorain, Mahoning, Medina, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas, Wayne—23 counties.

SOUTHEASTERN DISTRICT.

J. R. Clarke, Supervisor, 373 Wilbur Ave., Columbus, Franklin County, Ohio.

Counties—Athens, Delaware, Fairfield, Franklin, Gallia, Guernsey, Hocking, Jackson, Knox, Lawrence, Licking, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pickaway, Vinton, Washington—20 counties.

SOUTHWESTERN DISTRICT.

Lester S. Ivins, Supervisor, Lebanon, Warren County, Ohio.

Counties—Adams, Brown, Butler, Champaign, Clark, Clermont, Clinton, Darke, Fayette, Greene, Hamilton, Highland, Madison, Miami, Montgomery, Pike, Preble, Ross, Scioto, Shelby, Warren—21 counties.

TEXT-BOOKS IN AGRICULTURAL EDUCATION SUITABLE FOR THE ELEMENTARY SCHOOLE.

Name of Text-book.	*Name of Author.*	*Publishers.*
Agriculture for Young Folks.	A. D. & E. W. Wilson.	Webb & Co., Minneapolis.
First Principles of Agriculture	Goff & Mayne	Amer. Book Co., Cincinnati.
Agriculture for Beginners	Burkett, Stevens & Hill.	Ginn & Co., Columbus.
Elementary Agriculture	Hatch & Hazelwood	Rowe, Peterson & Co., Chicago.
Agriculture for Common Schools	Fisher & Cotton	Chas. Scribner's Sons, N. Y.
An Introduction to Agriculture	A. A. Upham	D. Appleton & Co., Columbus.
One Hundred Lessons in Elementary Agriculture	A. W. Nolan	Acme Pub. Co., Morgantown, W. Va.
Agriculture in the Public Schools	Lester S. Ivins	March Bros. Pub. Co., Lebanon, O.
Beginners in Agriculture	A. R. Mann	MacMillan Co., N. Y.
Rural School Agriculture	C. W. Davis	Orange Judd Co., N. Y.

PAPERS AND MAGAZINES THAT AID IN THE TEACHING AND STUDY OF AGRICULTURE.

American Agriculturist	Orange Judd Co., New York.
Ohio Farmer	Lawrence Pub. Co., Cleveland.
National Stockman and Farmer	Pittsburg.
Farm and Fireside	Springfield, Ohio.
Farm Journal	Philadelphia.
Poultry Journal	
A Boy's Paper	Carlinville Ill.

AGRICULTURE.

INTRODUCTION.

"Here in the country's heart
Where the grass is green,
Life is the same sweet life
As it e'er hath been."

'Trust in a God still lives,
And the bell as morn
Floats with a thought of God
O'er the rising corn."

'God comes down in the rain,
And the crop grows tall
This is the country faith
And the best of all."

It has been said that to know Nature and Man is the sum of earthly knowledge. But since man is the highest product of nature, there is really but one subject of study—the study of nature. Touch with Nature at first hand is the very breath of mental life. Children are born naturalists. In freshness, in lively interest, in originality, nothing equals a child. Its progress in learning is exceedingly rapid during its first years of life. This splendid growth process of infancy may be prolonged throughout life if the study of Nature has a central place in his schooling, if the love of Nature is implanted, and from it will spring the love of Art, of Science and of Religion. It has been well said that Nature Study is learning those things in Nature that are best worth knowing, to the end of doing those things that make life most worth living. Life is response to the order of Nature. Nature is all, over all, in all. Her laws are unchangeable. Nature is never against us. She is always for us. To have faith in Nature and learn of her is highest wisdom. Nature-study develops the power of observation and is the basis of all agricultural work. In the beginning we must fasten the children's affections on the region in which they are. We must teach them the common things with which they live from day to day. This is the new idea in Nature-study, that is coming gradually into our schools. In time gone by, the common school has had little relation to the life of its community; but it is undergoing evolution and gradually its point of view is being changed. The West has been putting Agriculture into its common schools, as has also the South in great part. It has been discovered that Agriculture may be made the means of training the minds of the young people as well as of giving temh information. The study of Agriculture is fundamental. As much so as Geography, Literature or Physics. City schools teach city life and the facts and atmosphere that go with city life, yet many cities

are adding Agriculture because of its broadening influence. If we are to have a healthy country life and a normal country people we must organize schools to teach country life and the facts of country life. We must be able to get good men out of country life by founding and maintaining homes wherein good men of the future may find a place in which to be born. To live in harmony with one's natural surroundings has a moral influence upon character. The boy or girl who takes an interest in growing plants and animals cannot be so bad as the child who does not care for or love these things. There is nothing but goodness in most plants and animals, and the child who grows up in harmony with them must imbibe some of this quality. If the country school is to find its setting largely in the affairs, the interests and aspirations of rural life; if the school in the large city is to make the best use of the materials at hand, the teacher must give the course for this composite Nature-study-agriculture, which will enrich and vitalize other studies and the teacher who handles them as well.. The teacher must be in sympathy with the work and also with the community in which he works. Sympathy is the ability to take another's point of view. It requires a clear head and a warm heart to get the point of view of the child and his environment, but it is necessary in order to lead, to encourage and to assist him to clearer mental vision.

THE TEACHER'S DUTY.

Every teacher ought to subscribe for several good farm papers and read them in order to get the modern viewpoint of the agriculturist. This will enable him to establish a sympathetic relationship with the community which is absolutely necessary before the best service can be rendered. Last, but not least, let every teacher in Ohio do some work in agriculture early this year. Remember, that all we eat, drink and wear comes from the soil. If you are teaching in the country, get your boys and girls to love their homes and to make them the most beautiful spots on earth. If you teach in a town or city, show your pupils that the only life worth living is the country life and to own a forty-acre farm is more to be desired than to become a drygoods clerk or a bookkeeper for some coal dealer. Pupils so trained by an enthusiastic teacher will make a daily advance, not only in agriculture study "but in personal power, in general serviceableness, and in consequent delight."

Training in this subject comprehends all educational aims. It culminates in scholarship, culture and service, and brings happiness to all.

Nature-study must be taught concretely. Books and leaflets are helpful, but will not take the place of the object. There is no textbook of real Nature-study. Teachers, books, and leaflets should be guides to the animals, plants and minerals. The child must see and handle the thing himself if he is really to know it. Nature-study should put him into sympathy with common affairs and the questions of the

work-a-day world and it should give him usable information. Sympathetic and vital contact with his surroundings will create an ever-abiding interest in the mind of the child and help to neutralize the dead formalism of the school. It will open a way to a free, spirited and natural way of teaching and a less restrained and more wholesome outlook on life in the young generation. Nature-study will keep the teacher young and interested in life and enable him to teach with spirit and cheerfulness. What Longfellow said of Agassiz may be said just as well of the teachers and children who have the true spirit of Nature-study:

"And he wandered away and away
With Nature, the dear old nurse,
Who sang to him night and day
The rhymes of the universe.

"And whenever the way seemed long,
Or his heart began to fail,
She would sing a more wonderful song,
Or tell a more marvelous tale."

PRIMARY DIVISION.

Fall Term.

FIRST GRADE.

The Nature studies of the First Grade will be largely informal, dealing generally with familiar material, increasing interest and cultivating habits of obesrvation and description. There ought to be many excursions—if only around the school premises—sometimes on a voyage of discovery, but generally to obtain the necessary material or to satisfy some other definite plan. There ought to be a close connection between home and school, both material and treatment, serving to relate the school to the home. The beautiful in nature will be brought out as well as the useful. The moral side must not be neglected. Accurate observation, telling and doing, will lay deep foundations for a love of truth. Language lessons should be based chiefly on this work in order to stimulate the use of first-hand material, but not every piece of work should end in the inevitable essay.

Discussion of summer experiences and out-of-door activities.

The home and who live there. What does father do? Mother? Sisters? Brothers?

Roms in the house; uses of each, furnishings. .

Schoolhouse; rooms, equipment, uses.

When rooms shold be clean.

Public places; the church, store, depot, town-house, factory, bank, etc. What is done in each.

Make and illustrate a weather chart for each month, serving to teach

days of week, name and character of months, seasons, birthdays, holidays, etc.

Informal field studies: Discover and follow seed dispersals in dandelion, thistle and milkweed. Identify a few common insects, a few most familiar birds, autumn wild flowers.

Plant bulbs of Chinese lily or paper-white narcissus in water.

Visit garden and farm to note autumn activities, harvesting, effect of frost. What the garden contributes; collection and simple study of common vegetables grown above ground; below ground. Draw and color a few. How stored for winter. Where we get vegetables when we have no garden; where the grocer obtains his supply; how he keeps them.

The pumpkin—in connection with Hallowe'en and Thanksgiving; the flower if available; the growth habit of the plant, Jack o' Lantern; preservation of seed.

Distinguish squashes from pumpkins.

Identification of individual trees near school or home, representing by drawing two different species selected from willow, cottonwood, elm, maple and oak. Autumn Arbor Day; transplant small seedling trees.

The first snow fall; observe descent of flakes, catch some upon cold dark cloth and study forms of large flakes.

Animal pets about the home. Animals at work for us. Where kept. How cared for.

Special study of the cat; habits, special senses, mental traits, wild relatives, enemy of birds.

The Christmas tree; purposes, source, decorations; evergreens as distinguished from trees which become bare in winter.

Uses of coal, iron, gold, silver.

Mining, lumbering and farming.

Winter Term.

Illustrated weather chart for each month. Winter games and sports. How winter affects the home activities. The shortened day, noting declining position of sun.

Clothing—Purposes, kinds, changes, care. Primitive clothing. Identification of summer and winter materials. Sources of each.

Shelter—What plants and animals do in winter; why houses are necessary to people; primitive homes; building materials. Uses of doors, windows, screens, storm doors, porches.

Make doll house of pasteboard or box. Equip with furniture, rugs, utensils; preserve distinction of rooms.

Heating the home; kinds of fuel; source and supply of wood; coal and gas; carbon the heat former.

Food—Name articles of food; where food comes from; carbon in food and how eating keeps the body warm; winter sources; home stor-

age; habits in eating and drinking; source of water; methods of cooking; simple lessons of hygiene of nutrition; care of teeth; table manners; thorough mastication; value of good cheer and appetite.

Care of house plants; plant necessities—soil, light, moisture, heat. Identification of a few common house plants; observation and care of bulb plants started in the fall.

The caged canary; habits, care; studied at home; other seed-eating birds.

Breathing and ventilation especially in sleeping rooms. Oxygen, the life-bearer, and how people and animals must breath to get it. Simple lessons in proper habits.

The five senses—Recognition, uses, practice and care of sense organs. Trace the senses among the animals; why absent from plants?

Emergencies—What to do in case of cuts, scratches, burns, nose bleed, frost bites—lessons given as occasion affords opportunity.

The horse—Uses, disposition, habits, care fitness for service to man.

Plant nasturtium in window boxes and in egg shells; later transplant from egg shells to chool or home garden; advantages of early planting.

Anticipations of spring; lengthening of days and other seasonal changes; weather, birds, trees—pussy willow, soft maples, elms, weeds, hibernating animals—insects, earthworms, snakes, ground spuirrels; preparation for gardening and lawns. Window boxes. Winter games and sports.

Gather a few pupae for study as they emerge in the spring.

Spring Term.

Continue weather charts.

Spring time activities at home; cleaning house; putting up screens and awnings; change in clothing; cleaning up the yard. Reparis; identification and use of a few carpenter's tools.

Follow changes in willow, soft maple, elm and study these twigs indoors. Opening of flower and twig bud; experiments in growing new trees from cuttings in water, sand, loam.

Early growth of herbs; identification of three or four common weeds and of wild and cultivated plants by means of foliage and habit of growth.

Make home and field acquaintance with a few most familiar birds; seek details of characteristic habits rather than a long list of bird names.

Arbor and Bird Day; indebtedness to trees and birds. Plant seeds of tlm willow and maple or arrange to obtain them later if they are not now mature; plant cuttings of willow which were started in earlies study;

plant a young apple tree, if one can be obtained; prepare and maintain a food table for birds; hang out threads, string or yarn as nest material; place a basin of water for birds where cats cannot annoy; add mud for robins' nesting; keep cat from harming birds. Songs and recitation about birds and trees,—but better, do things.

The squirrel and his habits.

Identification of a few spring flowers; simple wild flower chart with dates. Transplant specimens to wild flower garden at school and home.

The school garden. As a group, plant flower gardens and vegetable garden. Let each child have a share; develop choice of these plants for garden, planting pop-corn for next winter, and sunflowers for ornament or for food for chickens or other birds. Care of garden. Follow home garden, if a school garden is impossible. Plant nastutiums as border against building, fences or walk.

If possible, study the frog and its development; collection and care of frog spawn or tad-poles.

Life history of moth or butterfly and observations upon specimens that develop from the pupae that have been gathered.

BOOKS FOR TEACHERS.

Holtz Nature Study—Scribners. Hodge's Nature Study and Life—Ginn & Co. Cumming's Nature Study—American Book Co. Schmucker's Nature Books—J. B. Lippincott & Co. Upham's Introduction to Agriculture—D. Appleton & Co.

FIRST DIVISION.

FALL TERM.

(Grades 2, 3 and 4.)

Make carefully planned observational turs to come place, field, garden, meadow, animal home (such as nest, burrow, barn, stable, sty, etc.), woods, fiowing stream, spring, pond or lake, orchard, vineyard, factory, shop. Twice a week would not be too often. Let the children know the purpose of your tour before starting. Do not have more than one or two objects in view for one tour. On the following day talk about your tour and what was seen and learned. Collect specimens where feasible. Let the children write compositions on some object they have studied, its use, cultivation, etc., and keep for exhibits at school and at the fair. This may be made a part of the work in language. Some of the reading lessons *may be on subjects* pertaining to agriculture.

Aims of these lessons to the children:

1. Better and growing powers of observation.
2. Thoughtful habits.
3. Knowledge of a special kind.

4. Power of comparison acquired and the ability to distinguish objects—dissimilar and similar.
5. Storing useful information.

The oral and essay work may include description of the objects, their uses, cultivation, etc., in language and terms understood by the child. All this may in many ways be used as a part of the recitation in other branches—as language, number work, oral geography, in fact the reading lesson some times may be upon subjects pertaining to Agriculture.

Make much of the exhibits of the work of the children; keep it and show it in the school room on special days and send it to the fair as a part of the school exhibit.

Trips with the following in view: Effects of the frost; sprouting of the wheat; corn well shocked; birds yet to be seen; quail haunts and protection of these birds; the apple orchards; apple picking; making cider; marketing the apples and cider (something of vinegar may also be learned); digging and marketing potatoes and sweet potatoes; growing garden products; wild flowers; the forest trees getting ready for winter; make a collection of all kinds of seeds; spirrels; catterpillars and other small animal life, as time and the progress of the class will permit.

What to observe:

I. Around the farm home: The flowers, the shrubs, the fruit and shade trees, the plants of the garden, the grains in the grainaries and cribs, preparations for winter feeding, and housing, care of the farm animals, the pets of the children, the poultry; name the farm machinery and tools, and note the care of them; weeds, insects and birds.

II. On the farm: The plan of laying out the farm, names and number of fields, the woods, the fences, farm crops harvesting of corn; the weeds and flowers; the trees in the woods, the trees along the roads and lanes, the shade trees and the fruit trees, the farm animals and their uses; the farm products, the selling and marketing of the same or their preservation.

Continue weather observations. Note the time of the first frost and the first snowfall. Is the first frost more severe in high or in low places?

Gather all kinds of seeds and place them in properly labeled bottles for study and display. Get the children so familiar with them that they can distinguish them one from the other.

Preservation for winter and spring use of apples, potatoes, celery, cabbage, sweet potatoes and pumpkins.

Seed distribution: cockelbur, Spanish needle and burdock stealing rides on animals and people. Hickory nuts, walnuts, acorns and beech nuts carried by squirrels. Squirrels gather beechnuts into piles, which are sometimes discovered by boys. Seeds like those of cherries and berries carried by birds. Seeds of tumble grass blown by wind.

Value of warm and sanitary stables for farm animals and poultry.

Observe the flocks of blackbirds in autumn and find out where they go. Study the migratory habits of birds. What birds remain with us all winter and what do they eat? Teach the children ho wto keep the birds with us all winter.

How to protect rose bushes, strawberries and rhubarb for winter.

Preparing for and sowing wheat, corn cutting; the shock; naming all parts of the stalk; the silo; the pumpkin crop. Uses of garden products and fruits; canning of fruits. The value and beauty of shade trees; beautiful color of leaves in autumn.

General Suggestions and Hints.

1. The water in streams is muddy after a heavy rain because it is carrying soil and clay. Allow a tumbler full of muddy water to stand till mud settles. Pour off the clear water and allow the mud to dry. Examine. Streams wear their channels deeper and ravines are slowly formed. Teach this in connection with oral geography.

2. Boys and girls do not like to eat the same thing all the time. Same is true of our domestic animals. Balanced rations needed for both animals and people. Teach this in connection with oral physiology.

3. First lessons in sowing and planting are most impressive—the more so if the children do the work—all the work. Try it; have them plant at least one tree in October, let them do all the work, for they will be happy at it and happier in the spring when they see the leaves. Let them test some seed wheat in the seed tester.

4. Get some bulbs and have the pupils make a bed and plant them; you will all be delighted in the spring to see the bloom, and then you will have some material for spring study. Then do not forget that all this work at school is not yet what it should be if some of the same work is not done at the home of each and every child in these classes.

5. A trip to see some one thing of special importance—a tree for its foliage or fruit, its leaves, or signs of disease; to see a fine flower or garden bed; to look up the haunt or the nest of a wild animal or bird.

6. Young as these pupils may be it is the time to interest them in agricultural literature. Have the farm papers and nature study books at hand and assign short pieces to be read privately and reported to the class orally.

7. Have an exhibit of the work done at least every two weeks and invite the patrons in. Keep the best of these exhibits of every child's work for a general school exhibit of the township or village; keep the best of the township exhibits for the County and State Fair exhibits.

8. Let the teacher come to this task with a will to do as well or better in this subject as in any other. The next step will be to demonstrate to the pupils that the farm on which they live is their home and is just as

full of life as their own flesh and blood; it is not essentially a dry and disinteresting expanse of lifeless dirt and stone; above all, it is not a less refined place to live than the city, or the village—these ideals must the successful teacher love and enjoy.

9. A Woman's club of the women and girls of the vicinity would be a most valuable aid in all the grades in working with the teacher in carrying the good things of the school to the homes and in return the school would get many helps from these women and from the homes that would connect the school and the home and carry into effect the suggestions of this course and any of the plans of the teacher. The study of all the plants and animals would be promoted by such a club; the beautifying and sanitation of the school and the home would receive a great impetus from even a small club; pictures on the walls, books for the school and people of the neighborhood, the janitor work, the school grounds, etc., are some of the subjects that such a club would take up and work out.

WINTER TERM.

(Grades 2, 3 and 4.)

See suggestions in the Autumn Bulletin. Keep in mind the aims of this work on page 8 of the Autumn Bulletin.

Retain many of the specimens of the autumn work for the Fair exhibits and for the winter lessons.

The reading class, the oral geography and physiology classes are timely places for much recitation work in this subject. Assign a topic now and then to be worked out in these classes. Read about some subject appropriate to the grades and the season.

Observation trips with the following in view:

The condition of the lawn and garden so as to endure the hardships of winter and to be ready for the spring planting; the orchards and fruit lots, the buds, the sap; do all trees shed their leaves at the same time?

Farm Animals:

The care and shelter of farm animals during the winter months; the bridle bit should be warmed on a cold morning before put into a horse's mouth; the feeding of such animals; the care of the stables, poultry houses and cellars. The farm shop and the tool shed, name of each tool and its uses, and care of these. The expectation of these observation visits will have a most salutary and uplifting effect on the farms and in the homes that you visit.

The Birds—Those that have migrated; those that will remain all winter; the feeding and housing of these birds and does it pay.

Bird houses—The manner of living of winter residents, uses to the farmer, many birds die of cold and hunger; how we should care for them. How coax them to stay all winter and make a permanent home around the home of the boys and girls.

The frost and its effects—The frozen plant, frozen fruit, and frozen water, how protect from the frost, a strawberry bed prepared for the winter, fruit and vegetables preserved in cellars.

Continue weather observations. Learn to locate and recognize the Great Dipper, the North Star, the Pleiades, Orion. Note the elevation of the sun at noon, and if there is a south window; how far the sunlight shines into the room; the time and place of the rising of the moon and sun and something about the phases of the moon.

Special study of the cat, of the dog and two or three other farm animals; their habits, senses mental traits, food uses, domestic and wild relatives.

Teach the reading and uses of the thermometer. Study how the house is heated, how ventilated; value of sunlight, uses of sunlight, power of the direct vertical rays over indirect or slanting rays; all kinds of fuel.

Study of different soils after the crops are harvested and where the ground is bare. Pick up stones that show effects of weathering. Stones decay. This decayed stone material mingled with vegetable matter forms soil. Compare with rusting of iron.

Make collections of such seeds as are to be found; learn to name each when presented separately; let each pupil make a collection for the school and fair exhibits. Seeds of orchard fruits and garden vegetables may be arranged in exhibits and learned by sight by these pupils. Make a seed tester and get ready for the seed testing; let the children take an individual part in all this work.

The limbs and branches of the different kinds of trees—evergreens, forest and fruit trees—may be seen and studied at different times so as to note difference in structure and buds. Compare leaves of evergreens with those of the deciduous trees.

Ears of different varieties of corn may be brought to school and studied; size of grains and their quality, size of corn on good ears and on the improperly portioned ones, varieties of corn in the immediate neighborhood, popcorn and the popping of it; the study of stover, forage, meals and other feeds; the care of the corn cribs; the prevention of rat, mouse and other destruction of the grains; the shelling and grinding of corn.

The poultry yard; the care of the laying hens; gathering of the eggs, the care and cleanliness of the hen-house. Let the pupils construct the buildings out of paper, showing nest and roosting places.

Put some seeds to soak now and then and have the pupils write and tell orally what they see. The value of the proper care of all seeds during the winter can now be well taught and thorough learned.

Visits to a market to see and learn the marketing, the names of new objects, the buying and selling, the care of fruits, vegetables, etc., and preparation of these to be bought and sold. The shipping of vege-

tables not native could be the basis of a fine lesson in agricultural geography.

Have experiments with the growing of cuttings, seeds, bulbs, etc., in boxes of loam or sand. Study these and have the observations written up and told by the pupils from time to time.

Study native wild animals, its habits, covering, home, hibernation, etc.; have the pupils learn the native wild animals.

It is not necessary to separate the nature study and the study of physiology in these grades. The physiology and hygiene of the farm animals can be well taught in the oral work in physiology. See Autumn Bulletin and the Course of Study.

The minerals of the neighborhood, the soils, etc., are splendid subjects for nature study work at this season of the year.

General Suggestions.

1. The trips in the winter season should not be as long as at other seasons, they may be more specific so as to take less time if the weather is bad.

2. The work of the autumn should often be recalled and reviewed; specimens should be gathered and collections made that make a good exhibit. These should be preserved and shown at the school displays and at the fairs.

3. Effects of heat and cold should be well taught,—effects upon plants and animals.

4. Better farmers and farm life should be a constant aim in all this teaching. While we teach clean fields and gardens, we also teach clean bodies and minds in our pupils and the result will just as certainly be reflected in the citizenship of the future.

5. The habit of killing the wild animals and birds is now as never before a fruitful line for thought and should be counteracted by skilful teaching as fast as possible by creating different ideals and teaching the real uses of the different birds and animals; most of them are very useful.

6. The helpful sympathy and encouragement of the patrons in this teaching is also to be an aim; that they too may learn is to be expected for they never had the opportunity to study these things in school. So teachers of boys and girls are also teachers of men and women both of the present and of the future.

"I will walk abroad; all grief shall be forgotten today; for the air is cool and still, and the hills are high and stretch away to heaven; and the forest glades are as quiet as a churchyard; and with the dew I can wash away the fever from my forehead, and then I shall be unhappy no longer."—DeQuincey.

7. The winter months are the ones to use especially for exhibits that public should see, for it is at this time of the year that people like

to be entertained; exhibits of garden products that are being kept over, of soils and soil testing, of grains, fruits, insects, seeds of all kinds and seed testing, plans for the farm and for the garden for the next year, drawings, paintings, articles sewed, embroidered, etc., all make fine displays and each has its lessons for the children and for those who see. Contests if conducted without friction are also good drawing cards for a school exhibit. Let the bulletins, books on Agriculture and Nature Study, and the courses of study be parts of the exhibit at all times.

The materials for the County and State Fair exhibits can easily be taken from these displays and preserved until the time they are needed to be prepared for the fairs at the close of school.

First Division.

SPRING TERM.

(Grades, 2, 3 and 4.)

In addition to the aims set forth on page eight of the Auttumn Bulletin, one more aim needs to be kept in view in the spring work in these classes, namely: The value of proper preparation for the planting in every detail—selecting soils, preparing soils, selecting seeds, tools in order, fences in order.

Investigate the results of previous work, such as looking into the hot beds and cold frames and the starting of such if not already done; the examination of the rhubarb and strawberry beds; the hyacinths, jonquils, crocuses, and tulips are very interesting study now when the children are so anxious to see something growing; the onion and lettuce beds should be well along, especially the former if there was any fall planting; transplant wild flowers and plant seeds; the fall work for the extermination of weeds by destroying the old weed stalks and seeds by burning will now show its results and the attention of the pupils ought to be called to the value of this kind of work.

Around the farm house notice the condition of the flower beds, the garden and the fruit orchards; complete the preparation of these for the Spring planting and for the proper cultivation, fertilizing, spraying, etc. Learn the names of the different trees and plants found on the grounds; the walks and roads around the farm home and how to make them and keep them in order. Examination of the seed collections to see if they have kept well; planting seeds from these collections to see if they will grow. Note how the seeds have been preserved in different homes and call the attention of the children to the best methods of preserving grain, fruits and seeds of all kinds.

Get a measurement of each of the gardens represented in the class and use it in the arithmetic classes and for the purpose of planning what to plant in them. Study the plants and plans used the preceding year or years and teach the pupils how to improve upon them as to the beauty

and utility of the gardens. Have the children draw plans for the flower and garden beds and for the whole lawn and garden at their homes; visit some of these that are well planned and point out the various useful and beautiful phases of each lawn and garden. Call attention to trees and other objects in the garden. Is it a good thing to have trees in the garden? Why, or why not?

Plant some flower and garden seeds in egg shells and in the seed tester; show some seeds growing on wet cotton or under wet cloth; transplant the young plants, teaching the children how to do the work so as to be successful, using great care to every detail and that the pupils grasp the idea of each step; have the pupils do the work and use all patience with them in their every effort; if any fail, have them try again.

Visit some homes for the purpose of observing the house plants; it may have been well to have told the pupils that such visits as these would be made and then each home would have striven to have had something to show to the classmates when the observation visit was made.

Continue weather observations.

Study dew, rain and fogs.

This work can be best studied by trips to the woods, streams, railroads and other places of interest.

Trips to the woods to watch the new buds open, to name the trees, to learn to know the trees by their foliage, bark and general outlines, also study the blossom.

Other trips to these woods to study the birds, their habits, their home-making, their food gathering and their real uses to the garden and farm. The names of all the birds that remained over winter should have been well learned and then as the migratory birds come back in this season their names should be learned and the bird studied. Teach early in the school life of the child the useful birds and teach the special uses, and then we will all learn how few of the bird family there are that are not useful, for very many that we in the past have called enemies are in reality our friends and help very materially in the holding in check of the destructive insects; then back of the songs you and your pupils can hear on your excursions, think of the beauty of color and happy bird life you can see and feel.

The building of bird houses, the collection of material for the nests, and how the children can aid in this, the actual huilding of the nests, the eggs, the hatching and feeding the young, the rearing of the young and the flight from the nest. A most important element to be taught is the protection to be given these bird friends. With the forests thinning out more and more, the birds must be encouraged and assisted to make their homes with us.

The language work is alive when we use such topics as birds, bird life, and excursions among the birds as the basis of our language work;

such material is here found and it is a live matter in one channel of book language work year after year.

A trip to the banks of a stream to observe the flow, the drift and sediment carried, the deposits along the banks, the effects of the currents and eddies, the flow of ditches, springs, smaller streams, etc., into it, all have a special meaning. If thoughtfully planned as a class affair and as a recitation these trips will dawn upon the pupils as lessons in drainage, on erosion, on fertilizing the land by deposits of the overflow of streams, on the value or harm of running streams, upon the health of the people by carrying away the refuse, garbage, etc., and, in addition to all these objects the subject of commerce over the running streams may be elaborated upon and then lead the children from that to the study of commerce upon the canals, lakes and oceans.

A trip to the railroad depot or to the railroad to see the trains load and unload the express matter and freight, or simply to watch the trains pass and observe the products the trains carry to and from the neighborhood. Also study the other products carried to the farmers and observe the people traveling.

Many children and others, too, do not know the different plants — both wild and domestic — in their very young state; so a trip now and then to study the young flowers, weeds and vegetables, to know them by their earliest leaf productions will be worth while. Some of the seed collected in the autumn ought to be planted and the growth watched from day to day. By this method the pupils will recognize many of them.

The results of these trips can be worked out in the oral agricultural lessons and in the language work. The collection of interesting objects of study should be a very important part of every trip. Young as these pupils are they can be taught some of the diseases and the most harmful insects that visit the orchards and fields. The results of these trips to a language or geography class will rejuvenate the spirit of these classes even if the pupils do not understand all the technical parts of the subject.

SOME BOOKS FOR PUPILS OF THESE AND THE FOLLOWING GRADES.

Farm Friends and Farm Foes	D. C. Heath & Co.
Elements of Agriculture	D. C. Heath & Co.
Nature Study Readers	D. Appleton & Co.
Elements of Agriculture	D. Appleton & Co.
Playtime and Seedtime (series)	D. Appleton & Co.
Nature Study in the Elementary Schools	The MacMillan Co.
Uncle Henry's Letters to a Farm Boy	The MacMillan Co.
Nature Study (A series)	American Book Co.
Birds through the Year	American Book Co.
Ten Common Trees	American Book Co.
In the Year Round (series)	Ginn & Co.
Friends and Helpers	Ginn & Co.
Stories of Insect Life	Ginn & Co.

Life on the Farm..... A. Flanagan Co
Great American Industries ..... A. Flanagan Co.
The Corn Lady ..... A. Flanagan Co

SECOND DIVISION.

(Grades 5 and 6.)

FALL TERM.

Sources of Information.

In this division pupils should be taught the sources of valuable information for the student of agriculture. Important information can be secured from the following departments:

1. United States Department of Agriculture, Washington, D. C.
2. Ohio Agricultural Experiment Station, Wooster, Ohio.
3. State Board of Agriculture, Columbus, Ohio.
4. State Commissioner of Common Schools, Columbus, Ohio.
5. The State Supervisor of Agriculture in your district.
6. The Agricultural College, O. S. U., Columbus Ohio.

The Ohio Experiment Station, The Agricultural College, and the State Board of Agriculture and the department of the State School Commissioner send instructors and lecturers where the public may require their assistance.

It is the duty of the teacher to encourage cooperation between the community and these departments that are prepared to give assistance in agricultural instruction.

To know how and where to get information is part of an education. The teacher can show that agriculture is one of the broadest fields for the development of the intellectual powers; that it is the study of the three great kingdoms of nature; the mineral kingdom, the vegetable kingdom and the animal kingdom.

Write for Bulletin 19, Division of Publications, U. S. Department of Agriculture; this is a classification of all the publications of this department for the use of teachers.

There is such illustrative material that can be obtained free of cost by those who will take the pains to write for it; teachers can also secure from manufacturers, many samples of manufactured products, for school exhibits, to show what can be made from the raw materials of the farm.

Send to the U. S. Department of Agriculture for alfalfa cultures for experimental purposes; food products, maps, metric system charts; chart of the classification of clouds; a territorial map; and other similar publications from the government.

The Community.

This work should begin with a study of community life. The child should know the people of his community, and how they live;

how the community supports itself, and its relation to the neighboring communities; how churches, schools, roads, telephones, telegraphs and mail routes and many other modern conveniences come to be here; pupils should be taken on trips to visit shops, mines, and factories where they can have an opportunity to see different classes of the leading trades of the country; let them see the working of levers, pulleys, derricks, cranes and steam shovels; examples of water power, steam, electricity and gas. Let them see the traffic of the city and the different occupations represented; transportation, commerce and manufacturing; methods of transportation on lakes, rivers and canals; on railroads and public highways.

Study the subject of soils; how they were formed; the lay of the land and how it is drained; what the farms produce and why; road building methods; tools and materials used in construction; costs and benefits to be derived. Teach the important facts pertaining to the community.

Let the children go on excursions from the city to the country; let them come in touch with rural life; let them see some model farms with their well kept and well arranged buildings; the barns filled with grain, feed and well kept stock.

These trips may be used to furnish material for composition and language work.

Plants:

Continue garden work started in spring; care of strawberry beds and plants, raspberries and other plants in winter; tree planting in the fall; study contrast between evergreen and deciduous trees; plant nuts, peach seeds, acorns, and other seeds that come up the following spring.

Study the coloration and fall of autumn leaves; study changes as they take place in the oak, maple and a few other trees; make collections of leaves, of the walnut, elm, oak, willow, basswood, apple, thistle, clover, timothy, and other familiar leaves; arrange collections artistically on cardboard, in herbariums, or in some manner suitable for displays at township or county exhibits; leaves can be assembled in groups from their resemblance in venation, in base, in apex, in margin. Learn to recognize the leaves of each kind of tree represented in your collection.

Make a collection of different varieties of wood found in your part of the state; cut into sections or blocks of uniform size and length; show effects on the grained surface by cutting blocks lengthwise and at different angles; quartersawed; effects of planed and polished surfaces; modes of finishing woods.

Learn to recognize and name the different kinds of wood from the characteristics of the bark; the sawed surfaces; the rough; the polished sides.

Study the formation of grain; the texture and arrangement of cells; the rings of annual growth.

Study commercial uses and values of each; make a list of different kinds of woods and explain how used in construction of dwellings.

Study the woodman's life, forest and game preserves; conservation of our forests; natural resources; coal; waterpowers; water rights; iron; lead; copper; mines.

Make a drawing of a corn plant which has been carefully taken up by the roots. Cut across a piece of stalk; cut it lengthwise and examine structure; examine threads, air ducts, and outer part of stalk; note arrangement of leaves; circulation of sap; observe position of roots; study effects of cultivation, examine tassel; stamens; pollen; pistils.

Remove husks carefully from ear of corn; examine silk; fertilization; make collection of different types; study history; statistics; make collection of ten good ears; study uniformity; shape; weight; study kernel; draw diagram; structure composition; locate color, starch, gluten, hull, germ, tip and crown; observe number of rows, sides of kernel, embryo; study feeding value, and commercial value; manufactured articles.

Make a collection of apples from your neighborhood; study color, flavor texture; market value, adaptibility, keeping quality; cut crosswise and lengthwise and make drawings; observe star shaped arrangement of seeds; name parts; name parts of flower and show what part remains on an apple; study other fruits in same manner; preservation, preserves, uses, manufactured products.

Animals:

Make a list of the animals of the farm, forest, stream in your neighborhood; this will include mammals, birds, reptiles, fishes, frogs, insects; and other animal forms; explain difference in life; study beneficial and injurious forms; when possible make collections; make list of most useful and most injurious animals; make a comparison of the respective values of horses, cows, hogs, sheep, cattle, and poultry; make a list of the manufacturing industries dependent upon these products of the farm.

Make a comparative study of the acorn and the egg; of the life of a tree and a bird; of the life of a frog and a fish; of a bee and a butterfly. Identify fish of the neighboring streams; those on the market. Study methods of catching, fish culture; learn the classifiaction of a few such animals as the snail; tortoise; clam; eel.

Study migration of birds. (See course of study.) Study care and protection of birds that stay with us over winter. Study birds as seed and worm destroyers, classify the birds as birds of prey; songsters; waders; climbers; game birds; domesticated fowls.

The Ohio Experiment Station has prepared a bulletin on Ohio birds. It has been prepared expressly for the use of Ohio teachers, and will

be mailed to you by Sept. 1, if you will send your address to the station at Wooster, O.

Write to the National Association of Audubon Societies, 141, Broadway, N. Y., and ask for samples of leaflets, and directions for organizing a Junior Audubon Class for bird study. Send for Special Leaflet No. 22.

Have a lesson on the grasshopper. Make a collection of grasshoppers; name different parts of organs; legs, head, tail wings, feeders; count the legs as they are on the thorax or abdomen? Note their arrangement; observe shape and difference in size; shanks of hind legs; examine the antennae. Where is the grasshopper's backbone? Observe differenc betwen vertebrates and invertibrates.

Make a similar study of the honey-bee; the cricket; house-fly and other insects. Study manner in which insects produce sounds.

Drawing. Study colors and drawing.

Without drawing and coloring, our study of flowers, birds and insects will fall very far short of serving its highest purpose; observation, imagination, and creative power must go together. The Audubon Leaflets with outlines for suggestions and colorings can be of great assistance.

Minerals and Soils:—(See course of study.)

Make collections: pebbles, rocks, minerals, fossils, arrow heads and other relics of America's early inhabitants. Observe evidence of glacial period; evidences of lake beds; study bottom lands and source of alluvial deposits; difference between soil on high and low grounds; identify rocks and soids; study origin of gravel, sand, silt, clay, loam, muck, effects of atmospheric agents and elements on wearing away of hill sides; courses of streams; disintegration of rocks.

Farm Lands:

Let pupils use sand to show topography of immediate locality; draw map of a well drained farm and illustrate elevations, depressions with relief worked out in sand; show water courses; arrangement of fields. Show location of buildings, orchards, wells, woodlands, pasture lands, crops and other important features of farm management.

Study preparation of lawns; arrangement of trees, shrubs, vines, flower beds; seeding, rolling, watering, fertilizing, weeding, study plans for beautifying home grounds and dwellings; study advantages of order, arrangement, system, cleanliness and sanitary conditions in all the buildings and their equipments and environments.

WINTER TERM.

Follow the directions in the tentative course of study.

The teacher can give agricultural instruction every hour of the day by correlating it with every branch taught in the common schools.

Composition and Language:

Obtain colored pictures of famous paintings; there should be pictures of animals, rural scenes, and landscapes hanging on the walls of the school room. The pupils should be required to talk and write of their trips to the rivers, woods, fields, barns, factories and cities.

Reading:

Select lessons in reading adapted to the season and to the subject to be studied; read from books on nature; text books on agriculture. When studying birds read from the best selections on birds by the best prose and poetical writers; (see list of selections and books, page). Make reading the exponent and vehicle of good things.

History:

Study causes for the agricultural and industrial development of the U. S. Study the progress made in labor saving machinery and its influences on different parts of the country; study the history of corn and other products; learn something of the life of Luther Burbank, Thomas A. Edison, and other men of science; rather than warriors.

Physiology and Hygiene:

Make a comparative study of the structure of the physical organism of man and some of the lower animals; send for the "Farm, stock and Family Chart," by the Orange Judd Company, New York. Send to The U. S. Dept. of Agriculture and get the Food Products Maps; these will faciliate the teaching of composition of food materials; study hygienic laws in construction of farm buildings; care of animals; study sanitation with reference to water supply.

Geography:

Study the map and learn the location of the region producing each of our leading agricultural products; study the states that lead in the production of each; explain causes for difference in products; construct relief maps and product maps; arrange a corn map, a map showing location of other staple products and also an animal map; send to Washington to the department of agriculture and ask for Crop Reports published by the Secretary of Agriculture which will show distribution of products and give valuable statistics; this will furnish such supplementary work correlated with Geography.

Arithmetic:

Give supplementary problems with the lesson in arithmetic; have practical agricultural problems; they should combine the facts of agriculture with mathematical training; feeding problems; balanced rations; nutritive ratio; mixing of fertilizers; mixing sprays; construction of buildings; silos; cribs; granaries; tile drains; fences; road building; ditching; problems in seeding; planting and harvesting of wheat, corn and other crops; marketing; egg production; trade problems; make all

problems practical and applicable to the every day transactions of the community by consulting the daily market reports.

Plants:

Study a tree and name different parts; functions of parts; plant foods; sources of nourishment; study relations of air and leaves; roots and soils. Learn to recognize some of the common trees of the forest; name the best kinds of firewood; some of the best commercial woods; study treatment for lengthening the durability of buildings, post, ties, paving blocks, shingles.

Review study of your flower and weed specimens in your herbariums; Distinguish underground stems, bulbs, and tubers from roots; collect exhibits of each.

Study plans for the home garden; for experimental plots; make collections of flower and vegetable seeds; prepare seed testers; construct cold frames, hot beds and study methods of propagating plants.

Send to some good seed house for catalogue; make selections for spring seeding; toward spring test the germinating power of seeds.

Send to the Ohio Experiment Station for the following bulletins: The spray bulletin; The Ohio Weed Manual; Ohio Plant Diseases.

Discuss plans whereby a boy could produce the greatest income from an acre of ground; a farmer on ten acres; on twenty acres; on forty acres; on eighty acres.

Have corn judging contests; organize fro a corn growing contest; form boys' and girls' agricultural clubs.. Hold agricultural exhibits. Write to your supervisor of agriculture for infomation and plans.

ANIMALS:

Observe how the chipmunk, woodmouse, woodchuck, and muskrat prepare for winter; how they live; animals that hibernate: make an investigation of what becomes of certain insects and snakes in winter.

Household Pests:

Study methods for the destruction of mice, rats, flys, mosquitos, moths and other vermin; send to the U. S. Dept. of Agriculture for the following bulletins: (Farmer's Bulletins.)

155. How insects affect health in rural districts.
459. House Flies.
369. How to Destroy Rats.
383. How to Destroy English Sparrows.

Send to the bureau of entomology circulars. U. S. Dept. of Ag. for circulars:

34—House Ants; 36—The true Clothes Moths; 47—The Bedbug; 48—The house Centipede; 51—Cockroaches; 71—House Flies; 108—House Fleas.

Send for circular 76—List of Publications of the Bureau of Entomology.

Name the fur-bearing animals of your locality; explain causes for difference in values of winter and summer furs; name some animals that yield most valuable furs; effects of cold weather on the hair of domestic animals; observe effects of blanketing horses; note the change of colors between summer and winter in fur-bearing animals.

Observe difference in quantity of feed required between summer and winter; explain causes; explain balanced rations; why hens fed on corn alone may be fat, but not produce many eggs; observe difference in feeding beef and dairy cattle. Will a feed that produces fat be the same as that that is a good producer of milk?

Study the products of milk and beef; name the uses of hides, leather, bones, tallow, fat, hoof, hair, and other parts of slaughtered animals; what great industries are dependent upon the production of cattle, sheep, hogs and poultry?

Observe difference between herbivorous and carnivorous animals; name some that live on both flesh and vegetables; study the dog and his relatives; the cat and his relatives; name some animals that live in water and some that live both on land and in water; can we always distinguish clearly between plants and animals? Between organic and inorganic bodies?

Make observations and collections to show how closely the three great kingdoms of nature are merged into one another; that we can scarcely draw the lines of demarkation.

MINERALS:

Secure specimens of iron ore, different kinds of coal, limestone, sandstone, shale, marble and granite; explain how coal is formed from vegetable matter; limestone from shells; sandstone by nature's process of cementing together grains of sand; how shale is formed from mud; uses of limestone, sandstone and granite for building purposes; stones used for road building; how lime is obtained from limestone.

Have a specimen of a well weathered rock; study how clay is formed; sand; pebbles; explain how the different agencies have transformed the rocks into different types of soil.

Study soil water; make experiments to demonstrate permeability and capillarity of soils; show the ascent of water in dry soils by use of glass tubes or lamp chimneys; make experiments to illustrate the process of osmosis; show effects of working clay soil when wet; show effects of a mulch to retain moisture; explain irrigation; test soils for acidity; show effects of freezing, lining and humus on a clay soil.

FARM MANAGEMENT:

Water—

Study different sources for securing water; artesian wells; open wells; waterworks; filtered water; sterilized water; difference between soft and hard water; difference in the city and farm method of getting

water: study types of pumps and windmills; resorvoirs, tanks and cisterns; methods of heating or cooling for house use or for stock; study how water may become contaminated and contain disease germs such as typhoid; explain danger in using cups found at public drinking places; study new sanitary methods for drinking places.

Lighting and Heating:

Study systems of heating; the fan, steam, hot water, and gas systems; wood stoves and coal stoves; the fire place; study chimney construction; protection from fire; study combustion; effects of oxygen; observe movements of cold and warm air; explain principles of ventilation; study principles of the kerosene lamp; of electric lights; gas lights; send to the Standard Oil Company for samples of the products of oil; study nature, use and dangers of gasoline, acetyline, benzine, electricity.

Tools and Farm Mechanics:

Send to the Wooster Station for a bulletin No. 227, Farm Equipment; make a list of the tools needed on a farm of 80 acres; study cost as given in above named bulletin; study losses caused for want of care; name the tools that belong to a carpenter's outfit; name some tools every boy and girl should learn to use; study care of tools; preventing rust; name tools of a blacksmith shop.

Study principles involved in the construction and operation of farm machinery; mower, reaper, fanning mill; separator, cream separator, milk tester, pumps, wind mills, engine, electrical apparatus, water power, spraying machinery, seed drills, and other important and complex machines of the farm.

Schools should have courses in manual training; domestic science; there should be baking contests, sewing contests; instruction in a household economy; learn to construct handy household articles; ironing boards, broom holders, shelves, cases, boxes, and other useful articles.

And last and above all things else, let the boy have his pocket knife for,

"In the education of the lad,
No little part that implement hath had,
His pocket knife to the young whittler brings
A growing knowledge of material things.

Projectiles, music, and the sculptor's art,
His chestnut whistle and his shingle dart,
His elder pop-gun with its hickory rod,
Its sharp explosion and rebounding wad,
His corn-stalk fiddle, and the deeper tone
That murmurs from his pumpkin-stalk trombone,
Conspire to teach the boy. To these succeed
His bow, his arrow of a feathered reed,
His windmill, raised the passing breeze to win,
His water wheel that turns upon a pin,—

Or if his father lives upon the shore,
You'll see his ship, "beam ends upon the floor,"
Full rigged, with raking masts and timbers staunch
And waiting near the washtub for a launch."

Help the boy to construct these contrivances. Let him observe and do things. Read poems and prose selections that show great powers of observation, such as "The Barefoot Boy," and "The Brook."

Rural Economics:

Study the relation between location and value of farms; between fertility and value; between fruit, grain and stock farms; points that determine the value of land; why some farms are neglected or deserted; study the laws of supply and demand; location of the best markets; cost of production, transportation and marketing; study crop reports; study the shortage of crops and find the probable demand and produce accordingly.

Study the ten great virtues in crop production and farming:

1. Thorough drainage.
2. Soil fertility.
3. Early Plowing.
4. Thorough preparation.
5. Tested Seed.
6. Scientific Cultivation.
7. Clean crops.
8. Timely harvesting.
9. Highest prices.
10. Judicious investments.

Discuss:

Methods by which our mails are carried; distribution; different kinds of roads; effects of good and bad roads; on our mail delivery, business; schools, health, transportation and civilization.

How the school can be made the social center of the community; reviving the spirit of the old spelling school; the debating society; the literary club; make the school the home of the domestic science contest; the agricultural exhibit; the lecture course; the public forum; a place for paintings, sculpture, music, books, flowers, and happy children.

PLANTS:

Begin study of flowers with their earliest appearance in the spring; eachhh pupil should be provided with hand lens and herbariums; make collections of flowers and plants; press and place in herbarium; make drawings and write descriptions.

Study seeds, roots, stems, buds, leaves, flowers, fruits, and functions of each.

Study economic importance of seeds; as a source of food; list of foods from seeds; why food is stored in seed; compare plant food with animal food; food substances contained in seeds-sugars, starches, oils and proteins; name articles manufactured from the kernel of corn; from other grains; how does the ox prepare the food for us? The cow? Make a microscopic examination of a seed and name parts; by what agencies does nature disperse seeds? Make collections of seeds and arrange in small glass vials.

What forces are necessary for the germination of plants? Name some seeds that germinate first in spring; those that require the greatest amount before germination; conduct experiments to demonstrate effects of different degrees of light, heat and moisture on germination and growth of seeds; construct seed testers; place seeds in glass jars against the sides so they can be seen after being covered with oil; watch germination and growth; watch the development of the organs of vegetation; roots, stems and leaves.

Roots — Watch the formation of roots, root hairs; the root cap; note growth of stem and root in opposite directions; study anatomy of root and name parts; kinds of roots; compare roots of oak, corn and turnip; examine roots of air plants and parasitic plants; examine change of root of biennial plant the second year; why is it dry and tasteless?

What difference do we find between the growth of a sweet potato and an Irish potato? Which of these is a root? Which is a part of the stem? What is a tuber? What difference is there in their propagation?

Study difference between stems and roots of plants.

Stems:

Examine stems of potato, onion, radish, calamus, timothy, cane, mullein, maple; what are the functions of the stem? Make a list of stems of familiar plants; study difference between a corn stalk and trunk of an oak; observe that one grows from the inside and the other from the outside; observe difference between herbaceous and woody stems; difference between twig and trunk of an oak; study difference in stems that stand upright, those that twine, and those that trail upon the ground. Explain as to direction of growth of grape, ivy, strawberry and raspberry.

Make a list of stems used for food; for building purposes; from which we get products such as turpentine, syrup, sugar, molasses. Study trees that have valuable bark, roots, fruit and leaves. Compare the variety of economic products from the different parts of plants and decide which part is most valuable. Explain causes of knots.

Buds:

Compare a lily bud with the bud of an oak. Observe the several modes of arrangement of buds as they appear on stems; terminal and auxillary. Observe nodes and internodes; leaf scars; arrangement and

use of scales. Notice difference in branching of elm, oak, beech, pine, fir. Why is this difference? How does it affect the beauties of the winter woods?

Cut buds transversely and longitudinally and examine closely. Examine the folded leaves and position of flower cluster.

Leaves:

Examine a young healthy leaf; name parts; uses of each; relation between shape and arrangement; external characteristics; internal structure; transpiration; respiration; the fall of the leaf.

Flowers:

Inflorescence; kinds; essential organs; stamens; pistil; pollination; the ovary; make a horizontal diagram of the whole flower; make a vertical diagram; point out the sepals and petals; all important organs; fertilization; modes; hybrids.

Fruits:

What is fruit? Is a watermelon fruit? Use of fruit to the plant; name parts of an apple; examine stone fruit; explain difference between drupe and berry; explain difference between grains and legumes.

Name the ten chief elements of plant food; which of these are least abundant that usually have to be supplied to our soil? When a plant is burned what elements escape in the form of gas, as smoke and watery vapor? What remains in the ashes after combustion?

Study difference in varieties of plants; differences in same variety; study causes; how do we improve plants? Why should we study heredity and environment when selecting seeds and plants for propagation? Can we make a good selection of seed without seeing the whole plant?

Send to the national department of agriculture and ask for the following bulletins: Farmer's Bulletin, No. 157. Propagation of Plants. Study different methods; spores, seeds layering, tubers, buds, grafts. Note the periods of growth and reproduction; study duration — annuals, biennials and perennials.

Make drawings of trees before leaves appear in spring.

> "I see yonder leafless trees against the sky,
> How they diffuse themselves into the air,
> And, ever subdividing, separate,
> Limbs into branches, branches into twigs,
> As if they loved the element, and hasted
> To dissipate their being into it." EMERSON.

Note effect of light on color of plants; difference in color of apples on the upper limbs receiving most sunlight and those growing on the lower limbs where there is too much shade; notice the blanching of celery and the shadded leaves of cabbage; place a plant in a dark room and notice how the color will change; how if there is a window it will grow toward the light. Why do trees grow taller in the thick forest than

in an open space or field? How does this effect the value of timber? How should we prune fruit trees? Why do we mulch orchards? Study different kinds of mulch; study effects of deep cultivation. Should we hill up corn or potatoes?

Send to Washington for the following Farmer's Bulletins:

218. The School Garden.
409. School Lessons on Corn.
423. Forest Nurseries for Schools.
428. Testing Farm Seeds in the Home and in the Rural School.
468. Forestry in Nature Study.

Animals:

Study the principles of incubation; care of chicks; care of young farm animals, such as colts, calves, pigs. Read Bulletins and study diseases of young stock; watch for the migratory movement of birds; date of appearance; prepare attractions for the birds near the home, compare damages done with benefits derived from the presence of sparrows, black birds, crows, owls, hawks, swallow, wren, bluebird and brown thrush.

Soils.—Find samples of as many kinds of soil as possible; sand sandy loam, clay, clay loam, silt, silt loam, soil and subsoil; plant seeds in each kind and note results; study effect of water on each kind of soil; note color of soils, where is there more of the organic matter or humus, in the soil or in the subsoil? How does a farmer increase the amount of humus in the soil? On what kind of land do the following crope grow best; apples, peaches, potatoes, alfalfa, timothy, wheat, corn, oats, onions and celery?

BOOKS.

Nature:

1. In American Fields and Forests. W. E. Kershner, (O. T. R. C. Columbus, Ohio.)
2. The Outlook to Nature. — Bailey. The Macmillan Co., New York.
3. Farm Friends and Farm Foes. — Reed. D. C. Heath & Co., Boston.
4. Butterfly and Moth Book. — Miller. Charles Scribner's Sons, New York.
5. The Fall of the Year. — Sharp. Houghton, Mifflin & Co., Chicago.
6. Birds and Bees. — John Burroughs. Houghton, Mifflin & Co., Chicago.
7. Walden. — Thoreau.

Scientific.

1. Practical Course in Botany. — Andrews. American Book Co., Chicago.

2 Elements of Agriculture. — Warren. Orange Judd Co., New York.

3. First Principles of Soil Fertility. — Vivian. Orange Judd Co., New York.

4. One Hundred Lessons in Agriculture.— Nolan. Row, Peterson & Co., Chicago.

5. Agriculture in the Public Schools by March Bros., Pub. Co., Lebanon.

Have the pupils read some of the following selections in connection with subjects mentioned:

Birds:

To a Waterfowl —— Bryant.
The Winged Worshippers — Charles Sprague.
The Bobolink.
To a Skylark — Shelly.
The Sandpiper — Celia Thaxter.
The Skylark — James Hogg.
The Wounded Curlew —— Celia Thaxter.
The Birds of Killingworth — Longfellow.
The Singing Lesson — Jean Ingelow.
Robin Redbreast — William Arlingham.
The Winter-king — Selected.

Flowers:

Daffodils — Wordsworth.
The Bluebell — Selected.
The Flower — Tennyson.

Trees:

A forest Hymn — Bryant.
The Planting of the Apple Tree — Longfellow.
Woodman Spare that Tree — Morris.
Woods in Winter — Longfellow.
How the Leaves Came Down — Susan Coolidge.

Nature:

The Brook — Tennyson.
Break, Break, Break — Tennyson.
The Wanderer — Eugene Field.
The Ocean — Byron.
The Chambered Nautilus — Holmes.
Thanatopsis — Bryant.
The Stranger on the Sill — Thomas Buchanan Read.
The Cloud — Shelley.
Darkness — Bryon.

The Seasons:

The Death of the Flowers — Bryant.
September — Helen Hunt Jackson.
October's Bright Blue Weather — Helen Hunt Jackson.
The First Snowfall — Lowell. The Corn Song — Whittier.
Freaks of the Frost — Hannah Gould.
Snow Bound — Whittier.
It Snows — Sarah Hale.
Midwinter — Trowbridge.
The Dying Year — Prentice.
The Snowstorm — James Thomson.
A Summer Longing — George Arnold.
Spring Again — Celia Thaxter.
March — Wordsworth.
April Day — Caroline Southey.
The Rainy Day — Longfellow.
Work — Eliza Cook.
Sowing and Reaping — Adelaide Proctor.
The Song of the Sower — Bryant.
The Summer Shower — Thomas Buchanan Read.

The Rural Life:

The Country Life — Stoddard.
The Old Oaken Bucket — Woodworth.
The Barefoot Boy — Whittier.
A True Sportsman — Foss.
That Calf — Alice Cary.
The Humblebee — Emerson.
Thoughts for the Discouraged Farmer — James Whitcomb Riley.
Evangeline — Longfellow.
The Deserted Village — Goldsmith.
Strawberries — Trowbridge.
The Fountin — Lowell.
Living on a Farm — Selected.
The Voice of the Grass — Sarah Roberts.
Good Night.

In Nature Study:

Read from Shakespeare.
Quen Mab's Carriage. Romeo and Juliet 1., 4.
A Colony of Bees. Henry V, 1., 2.
Read Eve's description of Eden, in Book IX Milton's Paradise Lost.

After looking into the great open book of nature, let the student open the books of literature in nature-study.

Hunt for beautiful quotations from the best authors that are applicable to the subject under consideration.

Make a collection of these interpretations of beauty by the world's great lovers of nature.

Make selections from Shakespeare, Wordsworth, Byron, Shelley, Emerson, Bryant, Longfellow, Tennyson, Whittier, Holmes, Riley, Ruskin, Thoreau, Burroughs and other writers of poetry and prose.

THIRD DIVISION.

FALL TERM.

(Grades 7 and 8.)

See note to teacher at the beginning of this division in the Course of Study. A text-book on Elementary Agriculture should be used in this division. Give particular attention to the chief farm crop cultivated in your locality.

Study of Corn. — Have pupils bring to school a sample ear of each variety grown on their farm. Compare these and note difference. The ears brought by the different pupils should be labeled and numbered. In studying the different specimens of corn each ear brought to the class should be studied for the following characteristics:

A. Breed Characteristics.
   1. Shape and size of ear.
   2. Roughness of kernels.
   3. Color of ear.
      (a) Color of grain.
         1. Cap of grain.
         2. Side of grain.
      (b) Color and size of cob.
   4. Number of rows and size of kernels.
   5. Shape of grain as viewed in ear.

B. General Qualities:
   1. Weight of ear.
   2. Weight of grain.
   3. Weight of cob.
   4. Ratio of grain to cob.
   5. Size of kernels — shape, width, depth.
   6. Space between grains, between rows.
   7. Space between grains.
      (a) At tip.
      (b) At crown.
   8. Filling out of butts and tips of ears; maturity and seed condition.
      (a) Hardness of grain and cob.
      (b) Dryness of grain and cob.

(c) Weight of ear in proportion to size.
(d) Color of ear and grains.
  1. Due to immaturity.
  2. Due to moisture conditions.
(e) Color of germs.
(f) Size of germs.
(g) Freedom from mold and attack of insects or other injury.
  1. Uniformity of grains in:
    (a) Size.
    (b) Shape as viewed in ear.

Rules to observe in selecting good seed corn:

1. Ears should be of medium size.
2. Ears of a bright, healthy color, that are heavy for their size.
3. Ears with kernels of uniform size and shape.
4. Ears with rows running parallel to the length of the cob, with little space between the rows and well filled out at the butts and tips.
5. Ears having a uniform diameter; that is, not too pointed at the tip or too large at the butt.
6. Ears in which the germ of the kernel is large.
7. Ears that are produced under normal conditions.

Diseases of the corn plant. Insects that are injurious. The harvesting of corn. The selection of seed in the field. Methods of building the corn crib. Machinery — corn binders, corn shredders and huskers, corn cutters and corn shellers, etc. Plans for caring for seed corn in Fall and Winter. Experiments for showing shrinkage by keeping over Winter. Weigh a half bushel at harvest time. Weigh the same corn in April. Find loss. Formulate problem for class use showing loss in value when corn is sold in the Spring at Fall prices. Find the prices necessary to receive in Spring to justify loss of weight over Winter. For further information on farm problems see Hatch & Hazelwood's Elementary Agriculture, by Rowe, Peterson & Co., Chicago, 60c. Conduct a Corn Display and Contest. This can be done in connection with your Thanksgiving Day or other public exercises. Select recitations appropriate to the day. Have an exercise in corn judging where pupils are prepared. Compositions on "How I Cultivated My Corn," etc., "How I Grew My Potatoes," "How I Managed My Vegetable Garden," and similar subjects.

References: U. S. Department of Agriculture, Washington, D. C.; Farmers' Bulletins, No. 199, Corn Growing; No. 229, The Production of Good Seed Corn; No. 253, Germination of Seed Corn; No. 298, Food Value of Corn and Corn Products; No. 303, Corn Harvesting Machinery; No. 313, Harvesting and storing Corn.

Helps for Teachers.

(1) The A. B. C. of Corn Culture, by Prof. P. G. Holden, Ames, Iowa. This small pamphlet tells all about the culture of corn from the selecting of the seed to the harvesting of the crop the following year. It is all told in the language of the child.

(2) Nature Study on the Farm, American Book Co., Cincinnati, Short stories about things that take place on the farm.

(3) Farm Friends and Farm Foes, D. C. Heath & Co., New York. Farm Friends and Farm Foes, as indicated by the title, tells in simple language something about the things that are really the farmer's friend and points out the foes of the farmer and how to get rid of them.

(4) Examining and Grading Grains, Ginn & Co., Columbus. Examining and Grading Grains gives illustrations sohwing how all good grains should appear and sets forth rules for grading them.

(5) Agriculture in the Public Schools, published by March Bros., Lebanon. Agriculture in the Public Schools contains sixty practical experiments that pupils can perform with home made apparatus; rules for judging corn; how to conduct corn, vegetable and flower growing contests; questions to prepare the teacher for an examination in Agriculture with the bulletin suggested to answer many of the questions; and plans for the teaching of Agriculture.

Study of Wheat or Other Grain. — See Notes in Course of Study. Make a list of the grain crops grown in your neighborhood. Find the average yield per acre secured on the different grain crops. Account, if possible, for the cause that produced such a difference in yield in the same crop and on the same kind of soil. Was any fertilizer used? If so, what kind? What were the ingredients of same? Were the grain fields sown in clover or other grass? What became of the straw of the grain? Find out how many crops have been grown on different fields since they were in clover or other grass. What is meant by three year rotation? Four year rotation? Each pupil make a map of his home farm or one with which he is familiar. Indicate on this map the crop that was last grown in each field. Teach pupils to grade grain. What is meant by No. 1, 2, 3 and 4 in grading grains. Write to the Railroad and Warehouse Commission, Chicago, Ill. Ask them to send you (teacher) the rules for grading wheat, as fixed by the commission. Rules for the study of other grains can also be secured by writing this commission. Teach pupils plans of treating seed wheat or other grain to prevent smut. (See text-book.)

References: U. S. Department of Agriculture; Farmers' Bulletins, No. 132, Insect Enemies of Growing Wheat.

From Wooster Experiment Station, Wooster:

Wheat — Cultural and variety tests, Bul. 82, 118, 129, 165.

Oats—Cultural and variety tests, Bul. 67, 138 and Circular 88.

Diseases of Oats—Bul. 67, 97, 210.

Fruit Study. — See Notes in Course of Study.

1. What varieties are grown in your district? What varieties produce the best quality? Name those that ripen in the summer, in the Fall; which are the best keepers? Which are good "cooking" apples? "Eating" apples? Have pupils bring in a few samples of the Fall varieties. What insects injure the apples in your district? How can this be prevented? Secure "The Spray Calendar" from the Wooster Experiment Station, Wooster, Ohio. Should any one desire to know the "names" of certain apples, the same can be obtained by sending specimens to the Secretary of the State Board of Agriculture, Columbus, Ohio.

2. Where can young trees be secured? Find out all you can about some of the leading nurseries in Ohio. Write to the State Horticultural Society for information on fruit growing. The law of Ohio now requires that all orchards be sprayed at least once a year.

3. Learn the proper methods of planting the apple tree. Why trim the roots? Why trim the top?

4. Pruning is very important. Study your text-book on this subject. See also the State and National Bulletins on "Pruning." What time of the year do the farmers of your district prune their orchards?

5. See your text-book on methods of grafting and budding. The teacher can secure a set of grafting tools and can show the pupils how to proceed in this work.

6. Cultivation of the orchard. Are the orchards in your district well cared for? Are they sprayed regularly every year? Are they clean? How about the fence rows? Have they been kept free from orchard trash? Is the land cultivated every year or is it in grass? Is there any mulch about the tree? Could the yield be increased? How? Sometimes old orchards have been renovated, resulting in good profits. How can this be done? Write to Wooster Experiment Station and ask them to send you some literature on the "Cultivation of the Orchard." A few trees well cared for will give better results than a large number that are neglected. In planting an orchard for the home, select such varieties that have proven satisfactory in your locality and those that ripen their fruit at different times of the year.

7. Disease of the orchard.
   (a) Fungous — Blight, mildew and the scab.
   (b) Insect pests — The San Jose scale, codling moth, apple tree tent caterpillar, etc.

Learn to identify these pests. What is an insecticide? Name two. How are thep prepared? What is a fungicide? Name two. How are they prepared? For "sucking" insects a kerosene emulsion may be used.

References: U. S. Department of Agriculture, Farmers' Bulletins:
No. 87, Orchards, Cover crops, and Cultivation.
No. 113, The Apple and How to Grow It.
No. 154, The Home Fruit Garden.
No. 181, Pruning.
No. 198, Strawberries.
No. 283, Spraying for Apple Diseases.
No. 293, Use of Fruit as Food.
From Wooster Experiment Station, Wooster:
Orchard Culture, Bul. 171.
Dependable Fruits, Cir. 55.
Renewal of Old Orchards, Bul. 180.
The Codling Moth, Bul. 160.
Protection of Fruit Trees from Rodents, Bul. 208.

Weeds.—See Notes in Course.

1. The pupil should be taught to recognize the weeds and their seed that are common in your school district. Field trips may be taken or plants may be brought into the school room for identification. What is a weed? How do weeds travel? Do the weeds of the field differ from those of the garden? Name kinds common in each. Give frequent reviews in weed identification. You can do this by placing a slip of paper containing a number on each specimen and then have the pupils write the name on the paper. Weeds can be exchanged and grading done. Teach only the common name in the elementary school. High school pupils that have had Latin might also be given the Botanical name.

2. General characteristics of weeds:
   (a) A very extensive stem growth either erect or horizontal.
   (b) Special adaptation to soil conditions.
   (c) Usually perfect means of seed dispersal.
   (d) Other means of reproduction besides seeds.
   (e) Special adaptation to moisture conditions.

3. Weed control:
   (a) Plow ground early as possible after planting to get the weeds checked.
   (b) Keep the seed beds clean all summer.
   (c) Keep the fence, rows and pasture fields clean from weeds that may go to seed.
   (d) Practice crop rotation.
   (e) Plant a smothering crop.

4. Weed extermination:
   (a) Apply strong salt water or weak carbolic acid on plants.
   (b) Spraying such weeds as the dandelions, mustard and plantain with iron sulphate.

(c) Pull them out of the ground so as not to leave any roots.
(d) Plow as late as possible and follow by frequent harrowing when convenient.

5. Classification:
(a) Annuals.
(b) Biennials.
(c) Perennials.

References: U. S. Department of Agriculture, Farmer's Bulletins
No. 28, Weeds: and How to Kill Them.
No. 86, Thirty Poisonous Plants.
No. 188, Weeds Used in Medicine.
From the Wooster Experiment Station, Wooster:
Weed Manual, Bulletin 175.
Spraying for Weeds, Circular 102.

Insects.—See notes in bulletin.

Learn to recognize as many useful and injurious insects, as may be found conveniently in your district. Distinguish between the moth and the butterfly. See "Coulter-Patterson's Practical Nature Study" or Hodge's "Nature-Study and Life," for supplementary work in nature on insect life. Learn the life stages of the insect. Observe specimens illustrating the different stages in a few common insects. Learn the parts of the insect. Flies and mosquitoes can be studied in the Physiology class. Teach the children to see the relation existing between the insect world and the bird world; between the insect world and the plant world. Make a collection of useful and injurious insects to the farmer. Distinguish between the "biting" and the "sucking" insects; insect destroyers—birds, toads, etc. What birds live largely on insects? Why should these birds all be protected by law? Learn how to prepare a good insecticide.

References: U. S. Department of Agriculture, Bureau of Entomology:—Circular No. 16, The Larger Corn Stalk, borer; Circular No. 67, The Clover Root, borer; Circular No. 73, The Plum Curculio; Circular No. 87, The Colorado Beetle; Circular No. 92, Mites and Lice on Poultry; Circular No. 98, The Apple-tree Tent Caterpillar; Separate No. 355 (Year Book of 1904), Insects' Injuries to Forest Products; Separate No. 381, (1905), Insect Enemies of Forest Production.

U. S. Department of Agriculture, Farmer's Bulletins:
No. 99, Three Insect Enemies of Shade Trees.
No. 196, Usefulness of the American Toad.
No. 275, The Gypsy Moth.
From Wooster Experiment Station:
Insects Affecting Ohio Shade Trees, Bul. 194.
Spraying Machinery, Bul. 216.

For San Jose Scale, Bul. 169, Circular 69.
For Grape Rot, Bul. 130.
Chinch Bug, Bul. 77 and 106.
Cicada, Periodical, Bul. 87.
Hessian Fly, Bul. 107, 119, 136 and 177.

Forage Crops—See Notes in Course. What grasses are best adapted for permanent pasture? Why? For hay? Why? What are the true grasses? Where do they obtain their nitrogen? Are they beneficial to the soil? Why? What are the clovers? Where do they obtain their nitrogen? How do they improve the soil? Why should the seed of the clovers be planted with the seed of the true grasses for hay crops? Make a study of the "Meadow." What fertilizers are used to aid the growth of grass crops in your locality? Make a study of alfalfa and its culture. Find out the difference in the production and the methods of cultivating the different clovers. Also observe the following outline: When cut? How cured? Number of times cut? Purpose of second cutting. Why is the second growth often plowed under? Number of pounds of seed sowed to the acre? How is it threshed for seed? Yield per acre? Price per bushel? Number of pounds per bushel? Total average income per acre? Average net income per acre?

Classification of clovers:

(a) The true clovers.
(b) The medics.
(c) The melilots of sweet clovers.

The true clovers include: the red (mammoth and medium), the crimson, the alsike and the white.

The medics include the alfalfa and burr clover.

The mililots are white and yellow.

Compare food value of these clovers. Get each kind and teach pupils to recognize them. Note the root system—length, branching and nodules. Make a study of rape, millet and sorghum and other forage crops.

References: U. S. Department of Agriculture, Farmers' Bulletins:
No. 260, Seed of Red Clover.
No. 278, Leguminous Crops for Green Manuring.
No. 315, Progress in Legume Inoculation.
No. 318, Cowpeas.
No. 339, Alfalfa.

From Wooster Experiment Station, Wooster:
Culture of Alfalfa, Bul. 181, and Circular 91 and 80.
Forage Crops, Bul. 70.
Soy Beans, Cir. 78.

Millet, Circular 81.

The Farm Grasses of Ohio, Bul. 225.

See A. A. Upham's An Introduction to Agriculture, by D. Appleton & Co.; also Burkett, Stevens and Hill, by Ginn & Co.

Dairying.—See Notes in Course.

References: U. S. Department of Agriculture, Farmers' Bulletins:
No. 22, Feeding Farm Animals.
No. 55, The Dairy Herd.
No. 106, Breeds of Dairy Cattle.
No. 166, Cheese Making on the Farm.
No. 141, Butter Making on the Farm.

From Wooster Experiment Station, Wooster:
Feeding for Beef, Bul. 60.
Tuberculosis of Cattle, Bul. 108.
Silage versus Grain for Dairy Cows, Bul. 155.
Silage for Fattening Cattle, Bul. 193.
Value of Individual Records for Dairy Cows, Cir. 67.

Teach children the meaning of the term "Balanced Ration" and how to feed to produce a "balanced ration." See Goff & Mayne's First Principles of Agriculture, by American Book Company, Cincinnati.

Make a study of the silo. Best crops for silage. Why is corn the main silage crop? What kinds of corn are best adapted for silage? Why? At what stage of development should corn be cut for silage? Could good silage be made out of fully ripened corn? Why not? Does the frost effect the corn intended for silage? In filling the silo, why is it necessary to thoroughly pack the corn? Why should the corn next to the outside of the silo be packed more than that in the center? Have pupils bring corn to school that is in the proper condition for being placed in the silo. The parents should be consulted by the pupil in selecting corn in the proper condition for the silo.

See Farmers' Bulletins published at Washington:

No. 32, Silos and Silage.
No. 292, Cost of Filling Silos.

Milk.—Every pupil whose parents are interested in dairying should be taught the use of the Babcock tester. It is one of the most important factors to consider in the dairy business. Schools should be supplied with a Babcock Milk Tester. Teachers everywhere are surprised at the interest that can be aroused in the community by having the pupils test samples of milk and cream.

Pupils should also be taught:

(1) The care of the milk cans and pails.
(2) What feeding stuffs may effect the flavor of the milk.

(3) The reason for prompt removal of the milk from the stable.
(4) The necessity of the milker wearing clean clothing.
(5) The necessity of having cows kept clean and comfortable.
(6) The necessity of giving the cows good treatment—being kind and gentle with them at all times.
(7) The necessity of feeding balanced ration.

References: U. S. Department of Agriculture, Farmers' Bulletins:
No. 42, Facts about Milk.
No. 63, Care of Milk on the Farm.
No. 348, Bacteria in Milk.

Farm Papers: Do not fail to take a good farm paper to your school for the use of the pupils. Get them in the habit of reading these papers. See list recommended in the course of study. Secure samples of these journals and see that the pupils have access to at least one of these papers.

Social Life of the Rural Community.

The teacher should become a leader in educational matters in the community. Various plans may be carried out to bring this about. The following are suggested:

1. Parents' Meeting where exercises are given by the children. This gives the teacher and patrons an opportunity to become better acquainted.

2. Agricultural Clubs, where pupils are given an opportunity to express their views on different phases of Agricultural work and at which time contests may be held.

3. Rural Lecture Courses, where all departments of education may be presented.

4. Farmers' Institute. Teachers should interest themselves in the promotion of Farmers' Institutes.

5. Township and Village school displays sohuld be encouraged, consisting of all work done in school.

6. Traveling Libraries should be secured from the state department. Any one interested in getting the use of good books free should write the State Librarian, State House, Columbus, Ohio.

7. Encourage County Fair Boards to offer prizes on Agricultural products cultivated by your pupils.

8. Give your encouragement to all of the Farmers' Organizations that are promoting Agricultural Education.

WINTER TERM.

(Grades Seventh and Eighth.)

See notes to teacher at the beginning of this division in the Course of Study. A text-book on Elementary Agriculture (See list recom-

mended on page 11 of the Tentative Course of Study) should be used in this division. Give particular attention during the winter months to the study of "Housing and Protecting Farm Animals." *Study of Farm Animals*—Secure photographs of pictures of the common farm animals raised in Ohio. Pictures can be taken from Agricultural bulletins and agricultural newspapers. Teachers should also have the pupils visit a stock farm where pure bred animals are kept. The owners or keepers of these animals will be glad to explain to the children about the plans of caring for the animals, leading characteristics, etc.

The following outline is suggested for use in connection with the study of Farm Animals.

Farm Animals.

1. Horses.
   - (a) Origin and distribution.
   - (b) Types and breeds—their characteristics.
     - (1) Draft—English Shire, Clydesdale, Percheron, French Draft, Belgian, etc.
     - (2) Coach—French Coach, German Coach, Cleveland Bay, Hackney, etc.
     - (3) Roadsters and Light Harness—American Trotter, The Thoroughbred, The American Saddle Horse, etc.
     - (4) Ponies—Shetland, Indian ponies, Mustangs, Welsh Polo, etc.
2. Cattle.
   - (a) Origin and distribution.
   - (b) Types and breeds—their characteristics.
     - (1) Beef—Shorthorn, Hereford, Aberdeen—Angus, Galloway, Sussex.
     - (2) Dairy—Jersey, Guernsey, Ayrshire, Holstein—Frisian, Brown Swiss.
3. Swine.
   - (a) Origin and distribution.
   - (b) Types and breeds—their characteristics.
     - (1) Large Breeds—Chester White, Improved Yorkshire, Tamworth.
     - (2) Medium Breeds—Berkshire, Poland-china, Duroc-Jersey.
     - (3) Small Breeds—Small Yorkshire, Essex, Victoria, etc.
4. Sheep.
   - (a) Origin and distribution.
   - (b) Types and breeds—their characteristics.
     - (1) Fine—wooled—American Merino, Delaine Merino, French Merino and Cheviot.

(2) Medium—wooled—Southdown, Shropshire, Dorset, Hampshire, Oxford, etc.
(3) Long-wooled-Cotswold, Leicester and Lincoln.

References: Bulletins from the Department of Agriculture, Columbus. Bulletins from the Agricultural College, Columbus. U. S. Department of Agriculture, Washington D. C., Farmers' Bulletin.

No. 96, Raising Sheep for Mutton.
No. 159, Scab in Sheep.
No. 170, Principles of Horse Feeding.
No. 179, Horseshoeing.
No. 205, Pig Management.
See also Bulletins mentioned under Dairying in the "Fall Work".
See also the book—Types and Breeds of Farm Animals by Charles S. Plum.
Use supplementary text books and helps for teachers recommended under "Fall Work."

Bulletins from Wooster Experiment Station, Wooster, Ohio:
No. 195, Feeding work horses.
No. 91, 117, Lung and stomach worms of sheep.
179, 187, Fattening range lambs.
No. 73, (Circular), Tankage for hogs in cattle feed lots.
No. 209, Rations for fattening swine.
No. 213, Specific effects of rations on the development of swine.

Farm Machinery—Kinds, uses, value, care of. History to show improvement. Catalogues from concern where farm machines are manufactured can be secured for school use.

Soil Study—Test soil for acid and alkali. What elements are usually lacking in soils? How can they be secured? Secure samples of commercial fertilizers in small bottles. What are the ingredients of each? Samples of phosphate rock and other fertilizing materials can be secured for school use by addressing fertilizer factories. Make a collection of soils in small bottles. Test the soils for their power to retain water and for capillarity. Teaches uses of tile drains. Soil improvement. Influence of Crop Rotation on Soil Improvement. Saving soil moisture. Soil water. Soil mulch. Plant food in soil. Renewing old soil. Value of the clovers in soil improvement. Mixing of home fertilizers. Study methods to improve Ohio's soil. Influence of tillage on soil. Soil must be improved to support increased population. Perform experiments in connection with the study of soil.

References—U. S. Farmers' Bulletins:
No. 77, Liming of Soils.
No. 83, Tobacco Soils.
No. 88, Alkali Soils.

No. 257, Soil Fertility.
No. 266, Management of Soils.
No. 406, Soil Conservation.
From Wooster Experiment Station, Wooster.
No. 159, 141, Lime as a fertilizer.
No. 182, 183, 184, Maintenance of fertility.
No. 59, (Circular), Soil Treatment of Tobacco Beds.
No. 79, (Circular), Requirement for Ohio Soils.

Literature for the Teacher.

Walden, by Henry D. Thoreau.
Birds and Bees, by John Burroughs.
The Fall of the Year, by Dallas Lore Sharp.
The Bee People, by Margaret W. Morley.

In the study of birds, let the pupils read: The Wounded Curlew; To a Waterfowl; The Winged Worshipers; The Bobolink; To a Skylark; The Sandpiper; The Singing Lesson.

In the study of flowers, read: Daffodils, by Wordsworth. To Daffodils, by Robert Herrick.

Trees—A Forest Hymn—Bryant.

When you are studying kindness to animals, read: A True Sportsman, by Sam Walter Foss. That Calf—Alive Cary.

The Builders—Longfellow. Pictures in a Poem—Trowbridge.

In the study of nature, read: The Brook, by Tennyson. Coal, by Kingsley; The Wanderer, by Eugene Field; The Chambered Nautilus, by Dr. Holmes; The Ocean, by Byron; Thanatopsis, by Bryant; The Stranger on the Sill, by Thomas Buchanan Read.

Winter Study—Freaks of the Frost, by Hannah Gould.

The First Snowfall—Lowell. Midwinter—Trowbridge.

Angling—George Howland.

Among the best poems on rural life are such as, Longfellow's Evangeline, and Goldsmith's Deserted Village. The Waggoner of the Alleghanies, by Thomas Buchanan Read. Snow Bound, by Whittier.

Prose—Irving's Sketch-book.

SPRING WORK.

THIRD DIVISION.

(Grades 7 and 8.)

Poultry Raising:—Breeds of chickens of the neighborhood; characteristics of each; feeding, housing and general care. Incubators and brooders; expenses and profits in poultry.

1. Points to be observed in caring for eggs for hatching:—
   1. Gather every day in warm weather and every two or three hours in cold weather.
   2. Keep in temperature about 60° F.
   3. Turn eggs daily.
   4. Set eggs less than ten days old.
   5. Set regular shaped eggs.
   6. Set eggs from the best laying hens.
   7. Never set eggs from diseased chickens.

2. Points to be observed in caring for the hen while setting:—
   1. Place her where she will not be disturbed by other hens.
   2. Keep water and shelled corn before her.
   3. Keep box of dust or weak ashes before her.
   4. Dust the hen with insect powder when you set her and every week thereafter.
   5. Take her off the nest as soon as all fertile eggs are hatched.

3. Points to be observed in the care and feeding of young chicks:—
   (a) Care
      1. Place coops on well drained ground.
      2. Keep coops clean and airy.
      3. Move coops frequently.
      4. Change location every year.
      5. Dust with insect powder, etc., to prevent lice.
      6. Keep out rats, etc.
      7. Keep in small quarters while very young.

   (b) Feeding
      1. First meal when about 48 hours old.
         Bread soaked in milk and squeezed or boiled egg, then chick feed, fine grit.
      2. Later coarse corn meal, cracked corn and cracked wheat.
      3. After third week mix a little beef scraps with feed.
      4. Keep fresh water before them. Use drinking fountain if necessary to keep water clean.
      5. Feed three times a day while young.
      6. Small chicks should be fed in separate pens from old hens and large chicks.
      7. Skim milk and cheese are valuable food.

4. Care of cockerels:—
   1. Feed regularly and all that will be cleaned up well. Include beef scrap in rations.
   2. Keep in comparatively small quarters.
   3. Market when the price justifies and cockerels are in good condition.

5. Care of pullets:—
   1. Give free range.
   2. Worms, beef scrap or green bone.
   3. Fresh water and good grain.
   4. Keep in clean, well ventilated coops or houses.
   5. Avoid having them roost in a draft.
   6. Keep out lice and mites.
   7. If properly cared for they will lay by early winter.
   8. Market surplus stock.

6. Winter egg production:—
   1. Breed from winter layers.
   2. Use male from good layers.
   3. House: well ventilated, clean and dry.
   4. Exercise: Feed whole grain in litter.
   5. Green food: cabbage, beets, turnip, clover, alfalfa.
   6. Give fresh warm water.
   7. Avoid causing them to eat snow.
   8. Feed warm mash in mornings.
   9. Mash can be fed dry or moistened with hot water or warm skim milk.
   10. Mash may include corn meal, bran, oat meal, and about 5% ground alfalfa and beef scrap.
   11. Keep fine grit before them.

References: Poultry magazines and journals, Incubator catalogues and leading farm papers.

U. S. Department of Agriculture—Bulletins:

No. 41—Fowls, Care and Feeding.
No. 51—Standard Variety of Chickens.
No. 64—Ducks and Geese.
No. 236—Incubation and Incubators.
No. 141—Poultry Raising on the Farm.
No. 182—Poultry as Food.
No. 200—Turkeys, Varieties and Management.
No. 287—Poultry Management
No. 357—Methods of Poultry Management at the Maine Agricultural Experiment Station.

From Wooster Experiment Station, Wooster. Ask to be placed on their mailing list to receive all bulletins.

From Maine Agricultural Experiment Station, Orono, Maine:

No. 100—Poultry Management.
No. 168—The Fertility and Hatching of Eggs.

For disease of poultry—get Bulletin No. 138—The Poultry Industry in Maryland, from Maryland Agricultural Experiment Station, College Park, Md.

The Biggle Poultry Book from Farm Journal, Philadelphia, Pa.

Fruit Study—Where fruit raising is practiced extensively, study propagation by grafting, by budding. Why necessary. History of some one fruit from seed to maturity. Pruning, planting and spraying of fruit trees. Secure bulletins (See list mentioned under Fruit Study in the Autumn Bulletin). Also write State Board of Agriculture, Columbus and Wooster Experiment Station, Wooster, for their Spray Calendars.

Corn Study—Germination of seed, make corn testers; compare tests for vitality. Grading corn. History of Corn. Varieties adapted to your locality. Planting and Cultivating Methods. Experiment in depth of planting

Determining Germinating Strength.

NOTE TO TEACHERS: Points to be considered in preparing geminating boxes:

1. Direct pupils to bring to school shallow boxes filled with sand.
2. Have them divide the sand surface into small squares.
3. Number each one of the small squares.
4. Number ears of corn or other kinds of seed to be tested to correspond with the number on each small square.
5. Remove six grains from different parts of ear, number (1) and place in square number (1).
6. Continue this process until all squares are filled.
7. When all squares are filled moisten the sand and keep in a warm place until the corn (or other grain that is being tested) comes up.
8. In the country schools the boxes cannot be kept at school, if the house is not well heated over night. Pupils in these schools should be directed to take the boxes home and keep them where they will not be destroyed until the test is finished. The sand in the boxes should not be allowed to dry out until the plants have reached an inch or two in height. When the plants (if corn) have reached this height the boxes can be returned to school. The productiveness of each ear of corn may then easily be determined by noting the strength and vigor of the plant produced from each kernel planted. Reject all ears that did not produce strong plants that are uniform in size and all six grains productive. Some seasons it is impossible to get perfect germination in corn but we should get ears as near perfect as possible. See the form following for recording germinating tests.

Form for Recording Germinating Tests.

The following is a convenient form for keeping a record of seed testing that is carried on by pupils:—

Name of Seed: Corn.
Number of Seed in Tester: 200.

Date Started.	Date Sprouted.	No. of Grains Sprouted.	No of Grains not Sprouted.	Per Cent Sprouted.	Per Cent not Sprouted.
Feb. 4.....	Feb. 10.....	80	120	40	60
Feb. 15.....	Feb. 22.....	100	100	50	50
Feb. 25.....	Mar. 2.....	120	80	60	40
Mar. 3.....	Mar. 10.....	190	10	95	5
Mar. 4.....	Mar. 11.....	196	4	98	2

Source of Seed: Secured from a successful corn grower near home.

Remarks: Only the last show per cents good enough to plant. All sprouts in last two indicate a strong germ.

Name of pupil: Edwin Harkrader.

School: Hillsdale.

Prepare to have a corn, vegetable and flower growing contest during the summer and exhibit the products at the County Fair, or at school early in the fall term.

For information on "Corn Culture", "Nature Study on the Farm", "Farm Friends and Farm Foes", "Grading of Grains", and Plans for conducting Corn, Vegetable and Flower Growing Contests and exhibits, see under *Helps For Teachers,* page 14, of the Autumn Bulletin.

Always test all seeds for vitality before planting. Treat potatoes for scab with formalin. See text book for method. Examine clover and grass seed with hand lens to find weed seed and other impurities. See other suggestions in Autumn Bulletin.

*Corn Record.**

The following Corn Record is Suggested for Pupils Doing Contest Work:

Preparation of Seed Bed.....
.....
.....
Kind of Soil.....Area of Corn Plot.....
Variety of Seed Corn.....
From what place was the Seed Corn secured?.....
Was it tested to determine whether or not it would sprout?.....
Date of Planting?.....
What Depth? .....
Drilled or Checked?.....
When Corn appeared.....
Dates of cultivation and how cultivated?.....
.....
.....
.....

*This record can be altered so it can be used for vegetable and other contests.

Purposes of Cultivation?.....
.....
To what degree was the corn damaged by all causes?.....
Date of harvesting the ears?.....
Were the ten ears exhibited selected when the corn was standing or after husking?
.....
.....
Did you find the variety of corn you used suited to your soil and climate?
.....
.....
Why? .....
Witness, outside of family, that can certify, if necessary, that the corn was cultivated and harvested by the person keeping this record.....
..... Address .....

References: See list mentioned in Autumn Bulletin. Secure the following circulars from Wooster Experiment Station, Wooster.

No. 53—Experiments with Corn.

No. 66—Corn Breeding and Registration.

No. 71—The Selection of good seed corn.

Also No. 428—Testing Seeds—From Washington, D. C.

Bird Study—

1. Birds should be studied all the year around.

2. Begin with the ones the most common and learn to recognize a few each month. Winter is a good time to begin as there are not so many different kinds. Note changes in some species from season to season. Note song, manner of flight, nest, habits and food.

3. Learn the purpose of the Audubon Society.

4. Study the Ohio law for the protection of birds. What birds are protected by law? What other birds should be added to this list? Why should these be added? Name the native birds that are beneficial to farm crops. Injurious to farm crops.

5. Look up your Arbor Day Bulletins from this office for information on birds.

6. Discuss methods of encouraging birds to stay with us. See Hodge's Nature Study and Life, pp. 327-345.

7. Who are bird enemies? See Burrough's "Birds and Bees."

8. For suggestive exercises on birds see Coulter-Patterson's Nature Study, pp. 112, 122; also 301-313.

9. Study the economical value of birds and the migration of birds.

10. Old nest can be taken to school for study but discourage making egg collections as it leads to the destruction of birds.

Suggestion to teacher: If you desire your class to make a special study of the economical value of birds secure,—"Birds in Their Relation to Man" by Weed and Dearborn—published by Lippincott. Other books of interest on the subject of birds are as follows:—

1. Birds of Village and Field, Florence A. Merriam, Houghton, Mifflin & Co., Boston.

2. The First Book of Birds, Olive Thorne Miller, Houghton, Mifflin & Co., Boston.

3. Birds through the Year, Gilmore, American Book Co., Cincinnati.

4. Our Birds and Their Nestlings, Margaret C. Walker, American Book Co., Cincinnati.

References: U. S. Farmers Bulletin.

No. 54—Some Common Birds.

No. 197—Importation of Game Birds and Eggs for Propagation.

No. 383—How to destroy the English Sparrow.

No. 390—Pheasant Raising in the United States.

Note to teacher:—If pupils are interested in Quail have them write to Dr. H. C. Minnich, Oxford, Ohio, for information on raising quail. Dr. Minnich's son has been very successful in raising quail and will furnish information to those that may be interested in the subject.

Home Garden Studies—Those persons having had experience with school garden work not only in Ohio but also in other states agree that the home garden is better than the school garden to meet the need of rural children. In the larger villages and in the city, school gardens are without a doubt worth while, but, aside from the experimental work, they are in most cases neither practical nor profitable for the rural boy or girl. There is no question about the value of the Home Garden and the School Garden; the question is regarding its organization and management. The success of either plan will depend largely upon the enthusiasm of the teacher who must take the lead in all garden work. The teacher should plan the work carefully, first getting as much information on the subject as possible from all sources. Garden work successfully done is one of the very best possible means of interesting children in all forms of Agriculture. If it is not carefully planned and cared for after it is started it is likely to be a failure. Perhaps ninety per cent. of the failures in garden work result from the teacher undertaking the work before he has thoroughly investigated the subject and received some plans from other school teachers that have been successful. Then it is generally the case that most teachers ask the children to undertake too much in the beginning. Small gardens in the spring become large gardens when the sun gets hot in summer. Have each child who enters into the work understand that he is not to give up the work until it is completed. It is generally advisable to suggest to the children that they not undertake to plant more than two or three varieties of plants. The teacher undertaking garden work should have a record book and keep in it the names of the children planting gardens adn the kinds of seed grown by each one engaging in the work. These records should be left at the school, as a new teacher may be employed to take charge in the

fall and he must have these records. Children should be given credit for all their summer activities in the way of garden work or field work. The teacher should visit these gardens as often as possible and encourage the children in their work. Very simple records of the work done should be made by each pupil who has a garden.

Be sure to have an exhibit of some of the products cultivated by the children either at the County Fair or at the school house at the opening of school. You can have a "School Fair" of your own if it is not possible for all the children to take a part of their products to the County Fair. Have some exercises in connection with your "School Fair." Invite the parents and your State Supervisor of Agriculture to attend the exhibit. Secure some competent person to act as judge of the exhibit. Simple prizes may be offered for the best exhibit of each kind. It is very often advisable to secure the co-operation, if possible, of the parent in this garden and field work. Speak to the parents about the value of this work to the child and suggest that a piece of land be given to the child on which he may raise whatever he desires, and that he be allowed the profits obtained from the crops. The child should keep an account of the income and expenses. Teach him to see the businss side so that he may better understand the question of farm economics. If the crop is used by the parent, the child should be compensated for it.

References—U. S. Department of Agriculture. Farmers' Bulletins.
No. 154—The Home Fruit Garden.
No. 218—The School Garden.
No. 255—The Home and Vegetable Garden.
No. 256—Preparation of Vegetables for the table.
No. 385—Boys' and Girls' Agricultural Clubs.
No. 408—School Exercises in Plant Production.
No. 409—School Lessons on Corn.
No. 468—Farmers' Bulletin—Forestry in Nature Study.

TEXT-BOOKS IN AGRICULTURAL EDUCATION SUITABLE FOR THE 7TH AND 8TH GRADES OF THE ELEMENTARY SCHOOLS.

Name of Text-book.	*Name of Author.*	*Publishers.*
Beginnings in Agriculture....	Mann	MacMillan.
Agriculture for Young Folks.	A. D. & E. W. Wilson.	Webb & Co., Minneapolis.
First Principles of Agriculture	Goff & Mayne.....	Amer. Book Co., Cincinnati.
Agriculture for Beginners....	Burkett, Stevens & Hill.	Ginn & Co., Columbus.
Agriculture for Common Schools	Fisher & Cotton.....	Chas. Scribner's Sons, N. Y.

An Introduction to Agriculture	A. A. Upham	D. Appleton & Co., Columbus.
One Hundred Lessons in Elementary Agriculture	A. W. Nolan	Rowe, Peterson & Co., Chicago.
Agriculture in the Public Schools	Lester S. Ivins	March Bros. Pub. Co., Lebanon, O.

PAPERS AND MAGAZINES THAT AID IN THE TEACHING AND STUDY OF AGRICULTURE.

American Agriculturist	Orange Judd Co., New York.
Ohio Farmer	Lawrence Pub. Co., Cleveland.
National Stockman and Farmer	Pittsburg.
Farm and Fireside	Springfield, Ohio.
Farm Journal	Philadelphia.
Reliable Poultry Journal	Quincy, Ill.
Otwell's Farmer Boy (especially for boys and girls studying agriculture in school)	Carlinville, Ill.

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